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DEVELOPMENTAL LEVELS AND PARENTAL
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IN COLORADO.

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DEVELOPMENTAL LEVELS AND PARENTAL ATTITUDES

OF PRESCHOOL BLIND CHILDREN IN COLORADO

A Dissertation Submitted in Partial Fulfillment
of the Requirement for the Degree of
Doctor of Education

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School of Education

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ABSTRACT

Endress, Donna Therese. "Developmental Level and Parental Attitudes of Preschool Blind Children in Colorado." Unpublished Doctor of Education dissertation, Colorado State College, 1968.

Purpose

This study described the population of preschool children by (1) determining the developmental levels of these children and (2) evaluating parental attitudes, for the purpose of establishing a base upon which future preschool services could be planned.

Subjects

The subjects were twenty-one preschool children who represented the total known population of this group within the state of Colorado.

Procedures

Data were obtained from a home interview, administration of the Maxfield-Buchholz Social Maturity Scale for Blind Preschool Children, and the Parent Attitude Research Instrument questionnaire. This information was tabulated and summarized.

Results

The home interview consisted of observation of the child's behavior and recording background information regarding:

1. Chronological age: 1.42 years to 7.92 years
2. Sex: 15 boys, 6 girls
3. Position in family: 3 first children
4 having older and younger siblings
14 youngest children

N = 21

4. Etiology: 7 rubella or prenatal virus
5 optic atrophy
3 unknown
1 congenital absence of eyes
1 congenital cataracts
1 congenital glaucoma
1 perinatal hemorrhage
1 retrolental fibroplasia
1 tumor

N = 21

5. Degree of vision: 10 totally blind
11 believed to have vision beyond light perception

As a total unit, the preschool blind children in Colorado compared favorably with the Maxfield-Buchholz Scale norms. Each of the twenty-one children was evaluated in the seven areas of general development, dressing, eating, communication, locomotion, socialization, and occupation, and results were recorded by social age and by social quotient. The areas of highest achievement were general development and locomotion; middle range areas were dressing, eating, communication, and occupation; lowest area of achievement was socialization.

The three major factors of the Parent Attitude Research Instrument examined as continuum-type categories were: (1) Democracy-

Domination, (2) Acceptance-Rejection, and (3) Indulgence-Autonomy.

Nineteen of the twenty-one mothers responded to the PARI questionnaire. The reported attitudes indicated:

1. None of the mothers were rated as Dominating.
2. Parents of children 3.5 years and older reported stronger attitudes of democracy and acceptance than did parents of younger children.
3. Parents of children having some vision, although legally blind, reported stronger feelings of Democracy, Acceptance, and Indulgence than did parents of totally blind children.
4. Parents of children performing at or above age level expectancies indicated attitudes of greater acceptance and had more strongly autonomous attitudes than did parents of children performing below age level expectancies.
5. Mothers indicating attitudes of rejection also recorded autonomous attitudes.
6. Mothers of girls reported no attitudes of indulgence.

Comments and Implications

The developmental levels and parental attitudes described in this study represent only a cross section report of twenty-one children within one state.

A longitudinal dimension would be desirable to determine over-all consistency while extending the range of developmental skill patterns. It is hoped Colorado's Services for the Blind will follow-up by administering Maxfield-Buchholz and PARI scales to new children as they become known so the scope of this study may be broadened.

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CHAPTER I

INTRODUCTION

National emphasis is increasingly being directed toward pre-school and preparatory experiences in the general area of education. Advocated especially for culturally and experientially deprived children, as evidenced by the Head Start Programs and the growth of interest in early learning experiences, this same emphasis should logically be directed toward preschool services for children having sensory or physical deprivations.

In the area of visual impairment, the era of retrolental fibroplasia (due to an excess of oxygen during incubation) has largely passed by. The cause was discovered in the early 1950's and these children are now, for the most part, in their teens and early adulthood. However, a new phase resulting from the rubella epidemics of recent years is now evident and the cause has not yet been alleviated. Thus we are faced with meeting the challenge of providing optimum opportunities for these children and for their families.

Our traditional educational institutions must plan for these children as they reach school age. It seems conservative enough to say that these children and their families need not only medical services during early developmental stages, but also need counseling and preschool experiences for the child if he is to function at optimum level during subsequent stages of development. If a broader range of experiences is an educational essential for children with

cultural deprivations, then children with sensory deprivations should be entitled to at least an equal opportunity for environmental enlargement.

In an effort to plan constructively for programs for the preschool child who is blind, identification and description of these children must first be accomplished.

Vital factors in all preschool children's environment, and interwoven into their general development, are parental feelings. This, again, is perhaps even more crucial in families containing children with handicaps. Often these parents have never had contact with a blind person--adult or child--until their own child was born and their feelings understandably range from bewilderment and uncertainty to guilt and resentment. All feel uniquely alone.

Therefore, in order to plan more comprehensive and more useful services for the preschool blind, parental feelings and attitudes must also be considered.

Statement of the Problem

This study was an attempt to describe the population of preschool blind children in Colorado by:

1. determining the developmental levels of these children, using the Maxfield-Buchholz Social Maturity Scale for Blind Preschool Children as a frame of reference, and
2. evaluating parental attitudes, utilizing the Parent Attitude Research Instrument, in relationship to development of young blind children.

The objective of this descriptive study was to provide a base

for planning preschool services for the blind in Colorado. These services were interpreted as consisting essentially of parent counseling and parent education.

Statement of Procedure

This study was conducted with the cooperation of the Colorado State Department of Rehabilitation, Services for the Blind, through their contact with the families of all known preschool blind children in Colorado. Home interviews were made by appointment for administration of the Maxfield-Buchholz Scale and for direct observation of the child's behavior.

The Parent Attitude Research Instrument questionnaire was mailed to the parents after the home interview to both avoid an excessively long interview and to give the mothers the opportunity to record their attitudes at their convenience and with a minimum of stress and anxiety.

Delimitations

All findings, conclusions, and recommendations from this study should be interpreted with an awareness that these findings, conclusions, and recommendations pertain to specific groups as described below:

1. The subjects in this study are the total number known in Colorado whose parents agreed to be interviewed. The results of this study are applicable only to this group to the exclusion of those children institutionalized and those whose parents did not consent to participate.
2. The Maxfield-Buchholz Scale was used as the major measuring

instrument because it is, at the present time, the only instrument whereby developmental levels of preschool blind children can be compared with other blind children rather than with a sighted population. However, data pertaining to reliability and validity are admittedly incomplete.

3. No attempt was made to exclude from this study children who had handicaps in addition to their visual impairment. It was felt this is often an unknown factor at early stages.
4. The Parent Attitude Research Instrument (PARI), developed by Schaefer and Bell and funded by the National Institute of Mental Health, was chosen for this study because of its extensive background of internal consistency and test-retest reliability. This instrument was created for parents--not specifically for parents of children who are blind--for it is assumed that a specially designed scale is neither necessary nor desirable.

Definition of Terms

Preschool: As referred to in this study, the term describes children less than eight years of age who are not enrolled in a school program.

Blind: The definition used for legal purposes is: A corrected visual acuity of 20/200 or less in the better eye or a visual field subtending an arc of 20 degrees or less in widest diameter. However, acuity is often difficult to measure accurately in a young child. Thus, for this study, the definition recommended by the United States Office

of Education was used: "The term 'blindness' should be reserved for children who have no measurable vision or vision which is so limited as to be of little, if any, practical use as a channel of learning."¹

Developmental levels: The seven categories placed in year levels of expected performance in the Maxfield-Buchholz Scale:

1. Self-help general (encompassing areas such as grasping, sitting unsupported, caring for self at toilet, etc.)
2. Self-help dressing
3. Self-help eating
4. Communication
5. Socialization
6. Locomotion
7. Occupation (self-initiated activities)

Year levels: The Maxfield-Buchholz Scale identifies times of expected performance by six age levels:

0 - I year	III - IV years
I - II years	IV - V years
II - III years	V - VI years

Social age: This is calculated from the total score of the Maxfield-Buchholz Scale items completed and indicates the level of social competence as measured in years and decimals of years.

Social quotient: This term is defined in the Maxfield-Buchholz manual as "the relationship between chronological age and social age." However, the authors urge this be interpreted cautiously as it is affected by factors other than the child's inherent ability.

¹J. W. Jones, "Problems in Defining and Classifying Blindness," New Outlook for the Blind, LVI (1962), 115-21.

Preschool services: In this study, preschool studies refer mainly to the initial stages of parent counseling and parent education. However, a broader interpretation to include parent group sessions and community resources such as well baby clinics, nursery schools, and mental health facilities, are not to be discouraged.

Democracy - Domination: One of three units defined in the PARI as major parental attitudinal and behavioral determinants. Subscales within this first unit are:

1. Encouraging verbalism
2. Excluding outside influence
3. Equalitarianism
4. Comradeship and sharing

Acceptance - Rejection: Second of the three PARI units and containing subscales:

5. Breaking the will
6. Irritability
7. Rejection of homemaking role
8. Avoidance of communication
9. Dependency of mother

Indulgence - Autonomy: Third PARI unit with subscales:

10. Acceleration of development
11. Strictness.
12. Intrusiveness
13. Fostering dependency
14. Approval of activity

CHAPTER II

REVIEW OF RELATED LITERATURE

Studies in the area of young children who are blind have dealt primarily with comparing performance of blind children with that of sighted children.

The chief value of the Maxfield-Buchholz Scale has been that it attempts to measure the performance of a blind child with that of other blind children. Nowhere else in the related literature was there a research paper concerned with the preschool blind child's developmental level correlated with year level expectancies for this group.

For the purposes of this study, the review of research followed the two broad areas of

1. appraisal and evaluation of young children who are blind, and
2. parental and environmental aspects affecting development of blind children.

Appraisal and Evaluation of Young Children Who Are Blind

In spite of evident interest in the area of the preschool blind, there has been little research involving young children who are blind. This can be explained, in part, by considering the fact

that blindness is the least prevalent area of exceptionality among children. The United States Office of Education estimated that 1 in 3,000 (0.03 per cent) school age children fall within the confines of the accepted medico-legal definition of blindness (corrected vision of 20/200 in the better eye). Jones reports that 40 per cent of these children, legally classified as blind, use ink print rather than braille as their primary mode of reading.¹ For preschool children, it is often difficult to identify degree of vision and Hurlin found that statistics of blindness were seriously lacking in our country.²

Moor mentions another factor complicating research as reported by Wills, of Hampstead Therapy Clinic in England, who is interested in conducting research involving young blind children but is experiencing great difficulty in finding children without multiple impairment.³

Norris and others published a five-year longitudinal study

¹J. W. Jones, Blind Children: Degree of Vision, Mode of Reading (Washington, D. C.: Government Printing Office, 1961).

²R. G. Hurlin, "Estimated Prevalence of Blindness in the United States and in Individual States," Sight Saving Review (1962), pp. 162-63.

³Personal correspondence with Pauline M. Moor, American Foundation for the Blind, Inc., New York City, February 21, 1968.

of blind preschool children.¹ Almost 300 blind children in the Chicago area were studied intensively and were provided services by psychologists, social workers, and the project staff; evaluated by psychological tests, medical factors, social environment, inter-observational development and opportunities for learning. There was a high proportion of retrolental fibroplasia (85 per cent), a disproportionate percentage of girls (62 per cent), and the investigators reported limitations on usefulness of the appraisal instruments. Yet, Norris concluded that the opportunities for learning were more important determinants of a child's functioning level than degree of blindness, measured intelligence, or socioeconomic-educational background of parents; that no evidence of generalized brain defect was associated with retrolental fibroplasia; and that there was no related handicap that could specifically be attributed to blindness.

Maxfield and Buchholz developed an adaptation of the Vineland Scale, a Social Maturity Scale for Preschool Blind Children, in an attempt to assess social maturity in blind children aside from the limitations of visual impairment.² This adaptive scale is

¹Miriam Norris, Patricia J. Spaulding, and Fern H. Brodie, Blindness in Children (University of Chicago Press, 1957).

²Kathryn Maxfield and Sandra Buchholz, A Social Maturity Scale for Blind Preschool Children (New York: American Foundation for Blind, 1957).

intended to evaluate development of blind children in comparison with other children who are blind--rather than with the sighted population.

There have been numerous works encouraging parents and professionals to treat the young blind child first as a child, then to provide large measures of background experiences so the child will not be developmentally deprived.¹

Elonen and Zarensteyn examined appraisal of developmental lags in certain blind children.² They found this lag to often be pseudo-retardation and urged prevention or reversibility of pseudo-conditions. Elonen reported the child's development correlates closely with the preconceived attitudes of those about him,

¹Arnold Gesell and Catherine S. Amatruda, Developmental Diagnosis: Normal and Abnormal Child Development (New York: Hoeber, 1958); B. Spock and M. O. Larrigo, Caring for your Disabled Child (New York: Collier Books, 1965); How Shall Parents Manage Their Blind Children in Their Early Years at Home, and How Bring Them Up?, Report of Private Institution for the Blind, trans. by E. W. Allen (Linz, Austria, 1893); Stella Chess, Alexander Thomas, and Herbert G. Birch, Your Child Is a Person (New York: The Viking Press, 1965), pp. 179-86; Pauline M. Moor, "The Preschool Blind Child, His Needs and Resources," in Concerning the Education of Blind Children, ed. by Georgie Abel (New York: A.F.B., Inc., 1959), pp. 7-21; B. Lowenfeld, "Psychological Problems of Children with Impaired Vision," in Psychology of Exceptional Children and Youth, ed. by W. M. Cruickshank (Englewood Cliffs, New Jersey: Prentice-Hall, 1955), pp. 214-83.

²Anna S. Elonen and Sarah B. Zarensteyn, "Appraisal of Developmental Lag in Certain Blind Children," Journal of Pediatrics, LXV (October, 1964), 599-610.

including not only parents but also professionals whose help the parents seek.

Land and Vineberg, in gathering construct validation for the Bialer-Cromwell Children's Locus of Control Scale, found that blind children scored lower for internal control than sighted children with younger children scoring higher on external local of control in both groups.¹

Hayes' adaptation of the Binet in 1942 has continued to be in the "interim" stage up to the present time.² Although the Interim Hayes-Binet is still being used for the young blind child, it is awkward to administer and not very satisfactory for the very young blind child (less than five years). Scholl described the value of utilizing the Verbal Scale of the Wechsler Intelligence Scale for Children.³ This, again, works best for children in the middle range of years and is of doubtful value for the preschool child.

A study to evaluate the adequacy of the WISC and the Hayes-Binet as measures of the intelligence of blind children was made by

¹Shirley Land and S. E. Vineberg, "Locus of Control in Blind Children," Exceptional Children, XXXI (1965), 257-61.

²S. P. Hayes, "Is Achievement Testing Practical in the Primary Grades?" The International Journal for Education of the Blind, V (1956), 51-54.

³Geraldine Scholl, "Intelligence Tests for Visually Handicapped Children," Exceptional Children (December, 1953), pp. 116-20.

Gilbert and Rubin.¹ They found the WISC easier to administer and less tiring to the child but felt it lacked appraisal of the child's learning ability. Recommendation was made for "a new test of general intelligence standardized on blind children" to include a test of verbal reasoning as well as a test of meaningful verbal memory.

On the other hand, Bateman advocated "an absence of emphasis on global measures such as IQ"² and instead felt a concentration on specific abilities would lead to more definite action following psychological evaluation.

Hepfinger suggests psychological evaluation of young blind children (ages 4-6) be conducted as a team approach by psychologist and educator with all such children placed in a public day nursery, kindergarten, or public school program for a trial period of three months to three years.³ Only after the growth and adjustment of each child is evaluated during this time does she feel decisions should be made regarding the child's potential.

¹ Jeanne G. Gilbert and E. J. Rubin, "Evaluating the Intellect of Blind Children," The New Outlook for the Blind, LIX (1965), 238-40.

² Barbara D. Bateman, "Psychological Evaluation of Blind Children," The New Outlook for the Blind, LIX (1965), 193-96.

³ Lucy M. Hepfinger, "Psychological Evaluation of Young Blind Children," The New Outlook for the Blind, LVI (1962), 309-315.

Mayer warns the psychological examiner about the tendency to attribute all pathology to the blindness and, thus, over-emphasizing a passive blind child's capabilities.¹

Parental and Environmental Aspects Affecting
Development of Children Who Are Blind

According to Moor of the American Foundation for the Blind, the only known research being done at the present time in relation to very young blind children is a study by Selma Freiberg in the area of age development.²

Imamura compared behavior of preschool seeing and blind children and concluded that young blind children were more demanding of care and attention.³ Differences were discovered between reactions of blind and sighted children to similar types of parental behavior. It was concluded that self-reliant children from both groups had mothers who gave the attention sought.

In the area of parental attitudes, studied in relation to personality development of the adolescent child who is blind, Sommers found evidence of five categories of parental reaction to their blind children: (1) acceptance of handicap and of child, (2) denial that

¹Joseph Mayer, "Difficulties in Handling the 'Human Element' in the Psychological Evaluation of Blind Children," The International Journal for the Education of the Blind, XV (1966), 97-102.

²Moor, personal correspondence.

³Sadako Imamura, Mother and Blind Child, Research Series No. 14 (New York: American Foundation for the Blind, 1965).

either child or parent is affected by handicap, (3) overprotectiveness, and excessive pity, (4) disguised rejection, and (5) overt rejection.¹

In turn, Sommers reported the adolescent behavior closely related to reaction of parents--especially to that of the mother--by: (1) wholesome compensatory behavior, (2) denial reactions, (3) defensive behavior, (4) withdrawal tendencies, and (5) non-adjustive reactions.²

This importance of having satisfying parent-child relationships is reinforced by Hoffman, Rawls, Risenstadt, Scott, Langley, and Cerulli and Shugarman.³ Cohen states adjustments have to be made by the entire family unit, not just by the parents, and relates

¹Vita S. Sommers, The Influence of Parental Attitudes and Social Environment on the Personality Development of the Adolescent Blind (New York: American Foundation for Blind, 1944).

²Ibid.

³Barbara A. Hoffman, "Observations and Work with Preschool Blind Children," The International Journal for Education of Blind, VIII (1959), 93-97; Rachel F. Rawls, "Parental Reactions and Attitudes toward the Blind Child," New Outlook for the Blind, LI (1957), 92-97; A. A. Eisenstadt, "Psychological Problems of the Parents of a Blind Child," The International Journal for the Education of the Blind, V (1955), 20-23; Eileen Scott, "The Preschool Blind Child and His Parents," The International Journal for the Education of the Blind, VI (1956), 5-10; Elizabeth Langley, "Self Image, the Formative Years," New Outlook for the Blind, LV (1961), 80-81; F. Cerulli and Estelle E. Shugarman, "Emotional Disturbance--Infancy: Counseling the Family," New Outlook for the Blind, LV (1961), 294-97.

this to community services.¹

Blank reports that adjustment of the blind child is easier if there are siblings.² Further support of peer group association and integrated nursery school experiences for the young blind child as an aid to general development are Wolman, Scott, Branson and Branson, and Lowenfeld.³ Spencer and Murray detailed how basic principles of child guidance can be applied to blind children and emphasized the commonalities of blind and sighted children rather than the differences.⁴

Stressing the feedback to the child from his environment, rather than dwelling on the sensory deprivation, are Carroll, who states that blind children must be given the opportunity for wholeness--despite the qualms of the parents--during their growing

¹Pauline C. Cohen, "The Impact of the Handicapped Child on the Family," Social Casework, XLIII (1962), 137-42.

²H. Robert Blank, "Psychiatric Problems Associated with Congenital Blindness Due to Retrolental Fibroplasia," The New Outlook for the Blind, LIII (1959), 237-44.

³Marianne J. Wolman, "Preschool and Kindergarten Child Attitudes toward the Blind in an Integrated Program," The New Outlook for the Blind, LII (1958), 128-33; Eileen Scott, "The Blind Child in the Sighted Nursery School," The New Outlook for the Blind, LI (1957), 406-10; Helen K. and R. Branson, "The Blind Child and His Special Problems," The New Outlook for the Blind, L (1956), 122-28; B. Lowenfeld, "The Child Who Is Blind," Exceptional Children, XIX (1952), 96-102.

⁴Marietta B. Spencer, "Blind Children in Family and Community" (Minneapolis: University of Minnesota Press, 1960); Virginia Murray, "Parental Attitudes Affect Growth and Development of the Young Blind Child," The New Outlook for the Blind, LII (1958), 8-10.

years if they are to be whole adults,¹ and Cutsforth's theory that the congenitally blind suffers no feeling of privation other than that they may encounter in social relations, although it is difficult for the seeing to realize this.² Gibbons discussing health for visually impaired children stressed equal opportunity for the blind to become useful members of society.³

Kuhl reviewing his psychometric and personality studies of residential school children found a lack of initiative among these children but attributed their apathy to emotional blocking rather than to any physical cause and noted that physical and mental dependence upon their parents was both more prolonged and more intense in early childhood than was typical in seeing children.⁴

Schneider and Wagner point to importance of favorable adjustment during childhood as essential to later reaction patterns of blind individuals, particularly in areas of self-confidence, security,

¹T. J. Carroll, Blindness (Boston: Little, Brown and Company, 1961), p. 260.

²T. D. Cutsforth, The Blind in School and Society (New York: American Foundation for Blind, Inc., 1951), pp. 122-25.

³Helen Gibbons, "Mental Health for Children with Vision Disability," Sight Saving Review, XXX (1960).

⁴A. M. Kuhl, Results of Psychometric and Personality Studies of Blind Children at the California State School for the Blind, Thirtieth Biennial Convention of the American Association of Instructors of the Blind (1930), pp. 568-73.

and a sense of belonging.¹ Haspiel studying schizophrenics indicates children use a lack of function (autism) as a defense mechanism against an unacceptable environment--again pointing out the importance of early childhood development.²

In discussing self-image, Davis says body image is correlated with self-concept and that these are facilitated by sight.³ Thus these concepts develop more slowly in the blind. However, Jervis' definition of self-concept consists of self-esteem plus the physical and social system and points out that the sensory impairment of the blind predisposes difficulty in coping with environment.⁴ Gibbons also recognizes this interaction, and both emphasize the importance of not allowing the blind to avoid interaction and thus build a faulty self-concept.⁵

¹A. Schneider, "Blindness: A Psychologist's View of a Handicap," New Outlook for the Blind, LIX (1965), 69-72; Georgiana Wagner, "Emotional Disturbance--The Caseworker Faces the Adolescent," New Outlook for the Blind, LV (1961), 299-302.

²C. S. Haspiel, "Communication Breakdown in the Blind Emotionally Disturbed Child," New Outlook for the Blind, LIX (1965), 98-99.

³C. J. Davis, "Development of the Self-Concept," New Outlook for the Blind, LVIII (1964), 49-51.

⁴F. M. Jervis, "The Self in the Process of Obtaining and Maintaining Self-Esteem," New Outlook for the Blind, LIV (1964), 51-54; Jervis, A Comparison of Self-Concepts of Blind and Sighted Children, Publication No. 20 (Perkins School for the Blind, 1959).

⁵Gibbons, "Mental Health for Children."

In the manner of treating troubled family relationships, Kozier¹ recommends parental casework combined with counseling, while Maloney² suggests external stimulation in the form of sending child care aides into the home for periods of time varying from a few hours a week to full time care over a period of months. Rothchild suggests play therapy for blind children combined with concurrent parental therapy.³ Telson says that rarely does a parent perceive himself as contributing to the blind child's dependency and frequently needs help to allow "blindness to be a part of the child's life rather than a way of life."⁴ Yet, Burgess reminds counselors that a parent asking for help is one who is admitting his own efforts have not been sufficient to meet the child's need and, to many persons, this is role failure.⁵

Foundations of sound personality development were studied by Wolf,⁶ and the effect of disturbed parents on the young blind

¹Ada Kozier, "Casework with Parents of Blind Children," Social Casework, XLIII (1962), 15-22.

²Elizabeth Maloney, "Direct Intervention on Behalf of the Blind Child," Social Casework, XLIII (1962), 22-26.

³J. Rothchild, "Play Therapy with Blind Children," New Outlook for the Blind, LIV (1960), 329-34.

⁴Sara Telson, "Parent Counseling," New Outlook for the Blind, LIX (1965), 127-29.

⁵Caroline Burgess, "Counseling Parents of Children with Handicaps," The New Outlook for the Blind, XLIX (1955), 1-6.

⁶Anna M. Wolf, "The Emotional and Social Development of the Young Child," in The Blind Preschool Child, ed. by B. Lowenfeld (New York: American Foundation for Blind, Inc., 1947), pp. 55-56.

child was reported by Bachelis and Jones.¹

Community attitudes toward blindness were reviewed by Wolman, Himes, Handel, Stopper, Bateman, Rosenblum, Murphy, Kimmich, Dent, and Rusalem.² All were concerned with the ghetto-like characteristics surrounding the subculture of blindness and perceived the stereotyped community attitudes, such as assumed dependency, as being a greater cause of maladjustment among the blind than the physical absence of sight.

¹Leonard A. Bachelis, "Some Characteristics of Sensory Deprivation," New Outlook for the Blind, LV (1961), 288-93; Mozelle Jones, "Environmental Home and School Problems in the Education of the Blind," International Journal for the Education of the Blind, I (1951), 16-18.

²Wolman, "Preschool and Kindergarten Child"; J. S. Himes, "Changing Attitudes of the Public toward the blind," The New Outlook for the Blind, LII (1958), 330-35; A. I. Handel, "Community Attitudes Influencing the Psycho-Social Adjustment to Blindness," Journal of Rehabilitation, XXVI (1960), 23-25; A. Stopper, "Aspects of Emotional and Social Adjustments in a Group of Blind Subjects in the Developmental Age," Psychological Abstracts (1962); Barbara Bateman, "Sighted Children's Perceptions of Blind Children's Abilities," Exceptional Children, XXIX (1962), 42-46; M. Rosenblum, "The Blind Typhophile," New Outlook for the Blind, LIX (1965), 18029; A. T. Murphy, "Attitudes of Educators toward the Visually Handicapped," Sight Saving Review, XXX (1960), 157-61; Doris R. Kimmich, "Organic Conditions--Their Mental Health Implications: The Nature of Prejudice toward Blindness as Related to Ethnic Prejudice," American Journal of Orthopsychiatry, XXXIV (1964), 363-64; O. B. Dent, "An Investigation of Attitudes toward Work Adjustment of the Blind," New Outlook for the Blind, LVI (1962), 357-63; H. Rusalem, "Attitudes toward Blind Counselors in State Rehabilitation Agencies," Personnel and Guidance Journal, XXXIX (1960), 210-14.

Characteristics of emotional disturbance in the young blind child were studied by Gruber and Moor, Huffman, Kuhlman, Zwarensteyn, and Cruickshank.¹ Noted, along with the identification of characteristics, was the absence of facilities for the majority of these children.

In the realm of treatment, the American Foundation for the Blind Workshop Report on potentialities and problems of emotionally disturbed blind children suggested a coordinating council to integrate services for the blind and recommended more community services for the preschool child and for parental help.² Elonen and Polzien described their work in Michigan with the deviant blind child and stressed the importance of early stimulation and training in

¹Kathern F. Gruber and Pauline M. Moor, eds., No Place to Go (New York: American Foundation for the Blind, 1963); Mildred B. Huffman, "Growth through Interest and Experience in Young Children Who Are Mentally Retarded and Emotionally Disturbed in a Residential School for the Blind" (unpublished Master's project, San Francisco State College, 1957); Frieda M. Kuhlman, "Responsibility for Blind Preschool Children of Social Workers in General Service Agencies," in The Blind Preschool Child, ed. by B. Lowenfeld (New York: American Foundation for the Blind, Inc., 1947), pp. 31-43; Sarah B. Zwarensteyn and Margaret Zerby, "A Residential School Program for Multi-Handicapped Blind Children," New Outlook for the Blind, LVI (1962), 191-99; W. M. Cruickshank, "The Multiple-Handicapped Child and Courageous Action," International Journal for the Education of the Blind, XIII (1964), 65-75.

²American Foundation for the Blind, Potentialities and Problems of Severely Disturbed Blind Children (New York: The Foundation, 1960).

bringing about dramatic developmental growth.¹ McQuie emphasized permissiveness with no formal classroom in treating the emotionally disturbed blind child,² while Weiner took the opposite approach claiming this permissiveness allows the child to remain in his shell when he needs, instead, a reality-enforced environment with limits and rules.³ Kenyon advocated residential living for the emotionally disturbed blind child, including the preschool child.⁴ Frostig and Horne placed equal discipline upon the therapist, the child, and the environment of the child in treating autistic blind children.⁵ A preschool therapy group was conducted in a hospital setting by Fineburg and Johnson stressing interrelationships with peers and

¹A. S. Elonen and M. Polzien, "Work with Deviant Blind Children," New Outlook for the Blind, LIX (1965), 122-27.

²B. McQuie, "Severely Disturbed Blind Children," International Journal of Education of the Blind, X (1960), 34-37.

³L. M. Weiner, "Educating the Emotionally Disturbed Blind Child," International Journal for the Education of the Blind, XI (1962), 77-79.

⁴Eunice Kenyon, "Twenty-four Hours a Day," International Journal for the Education of the Blind (October, 1963), pp. 19-22.

⁵Marianne Frostig and David Horne, "Treatment of Severely Disturbed Children with Perceptual Dysfunction and Blindness: The World Outside: A Longitudinal Study of the Treatment of Two Blind Psychotic Children," American Journal of Orthopsychiatry, XXXIV (1964), 295-96.

interpersonal communication.¹ This program was designed not to treat emotional disturbance, but to prevent it in children having physical problems.

In studying multiple handicapped children, Rigby states that approximately one-third of the children who are blind (under age twenty-one) also have additional handicaps.² Root evaluated services for the multiple handicapped children and found that no matter the number of services available, none is used as extensively as possible.³ She suggests an interdisciplinary approach in evaluation. Donlon recommends the evaluation center remain involved even after placement of a multihandicapped child is made so that this placement is a step rather than a final solution.⁴ Elonen and Cain describe encouraging results in reversibility of early age disturbances in working with multiple handicapped children when they also worked with family attitudes.⁵

¹H. H. Fineburg, and Margaret Johnson, "Preliminary Report of a Preschool Therapy Group in a Children's Hospital," American Journal of Orthopsychiatry, XXVII (1957), 808-14.

²Mary E. Rigby, "Some of the Problems of the Multihandicapped" International Journal for the Education of the Blind, XII (May, 1963), 97-102.

³Ferne K. Root, "Evaluation of Services for Multiple-Handicapped Blind Children," International Journal for the Education of the Blind, XIII (December, 1963), 33-38.

⁴E. T. Donlon, "An Evaluation Center for the Blind Child with Multiple Handicaps," International Journal for the Education of the Blind, XIII (1964), 78-79.

⁵Anna S. Elonen and A. C. Cain, "The Diagnostic Evaluation and Treatment of Multiple-Handicapped Blind Children," American Journal of Orthopsychiatry, XXXIII (1964), 351-52.

Schaefer and Bell, psychologists in the Child Development Section of the National Institute of Mental Health, constructed a Parent Attitude Research Instrument (PARI) which has been the basis for a large amount of research.¹ Watson² and Mussen³ gave favorable reports on validity and reliability for this scale and Coopersmith⁴ used the PARI as one of the instruments in his study of parent-child interaction in relation to self-esteem. Cowen, Underberg, Verrillo, and Benham discussed research using the PARI in their study of adjustment of adolescents to visual disability and recommended extension of this study of parent attitude-child adjustment to the area of visual disability.⁵

Wilson and Halverson's case study of a two-year-old child who was blind revealed general retardation attributed to inadequate

¹E. S. Schaefer and R. Q. Bell, "Development of a Parental Attitude Research Instrument," Child Development, XXIX (1958), 339-61.

²R. I. Watson, Psychology of the Child (New York: John Wiley and Sons, 1965).

³P. H. Mussen, Handbook of Research Methods in Child Development (New York: John Wiley and Sons, Inc., 1960), pp. 974-76.

⁴Stanley Coopersmith, The Antecedents of Self-Esteem (San Francisco: W. H. Freeman and Company, 1967).

⁵E. L. Cowen, R. P. Underberg, R. T. Verrillo, and F. G. Benham, Adjustment to Visual Disability in Adolescence (New York: American Foundation for the Blind, 1961), pp. 31-32.

perception of space,¹ and medical social casework reviewed by Hill stressed services for the blind preschool child.²

Kerby detailed distribution of visual defects in children and found blindness caused by infections and by injuries has been reduced greatly during the past thirty years.³ However, etiology of approximately one-half of the congenitally blind children are still reported as unknown prenatal causes.

In light of the medical advance, which is saving more birth defect babies, and the recent rubella epidemics, Wolf investigated the problem of blind children having concomitant disabilities and reported that more schools are accepting these children than before, but there are serious conflicting viewpoints concerning appropriate educational programs and much uncertainty about specific concepts concerning education of these children.⁴

Axelrod studied effects of early blindness (before eighteen months) on performance in tactile and auditory tasks, and compared

¹J. Wilson and H. M. Halversen, "Development of a Young Blind Child," Journal of Genetic Psychology, LXXI (1947), 155-75.

²Beth E. Hill, "Social Treatment of the Young Blind Child," Social Casework, XXXII (1951), 381-88.

³C. Edith Kerby, "Causes of Blindness in Children of School Age," The Sight Saving Review, XXVIII (1958).

⁴James M. Wolf, The Blind Child with Concomitant Disabilities, Research No. 16 (New York: American Foundation for Blind, 1967).

this performance with that of sighted children.¹ He reported consistent superiority of performance by the sighted in learning the tasks--raising the question of effects of early sensory deprivation on later learning. He did not find significant differences between performance of late blind and seeing children. This corresponds uniquely with a portion of Dante's Paradiso:

Così parlar conviensi al vostro ingegno
 Perocché solo dal sensato apprende
 Ciò che fa poscia d'intelletto degno.
 (This is the proper way to speak to your mind;
 because only from what is perceived by the
 senses does it learn the things it later
 makes worth of the intellect).²

Summary

A major emphasis of many writers in the field has been a retrospective agreement that preschool experiences and early childhood adjustment are important factors for healthy adolescence and prevention of later problems.

There appears to be increasing concern over the emotional development of children who are blind with an emergence of the importance of the self image as related to social interaction and with the total family interrelationship.

¹Seymour Axelrod, Effects of Early Blindness, Series No. 7 (New York: American Foundation for the Blind, 1959).

²Dante, Paradiso IV, in Education of Vision, ed. by Gyorgy Kepes (New York: George Braziller, Inc., 1965), pp. 40-42.

Little has been reported in recent years involving more effective methods of appraisal of young children who are blind although it is commonly agreed that these children need an expanded environment and better methods of evaluation.

The ratio of multiple impairment is increasing, because of the rubella epidemics and because more of the severely impaired birth defect babies are being saved through medical advances while, at the same time, the percentage of children being blinded by infections and by injuries is decreasing. This changing ratio will directly affect our educational programming.

CHAPTER III

METHODS AND PROCEDURES

This chapter describes the selection of subjects for the study, the investigative method, and the procedures used in analyzing the data.

Selection of Subjects

Presently a total of thirty-seven families of preschool blind children are known to the Colorado State Department of Rehabilitation, Services for the Blind.

These families were contacted through letters mailed by Services for the Blind explaining the study and soliciting their participation. A cover letter from Services for the Blind was included indicating their support of the project and written parental permission for home interviews was requested.

Follow-up was made by Services for the Blind of families not responding to the initial invitation to identify reasons for nonparticipation.

Institutionalized children were not included because of inability to receive permission to contact this population. However, it was also felt that these children would presumably have a greater multiplicity of compounded problems as well as a different frame of

reference for basing the Maxfield Buchholz Scale and the PARI than would children living in a family situation.

Thus, the total population of preschool blind within a family situation, known to the Colorado Department of Rehabilitation, was included.

Description of the Instruments

The Maxfield-Buchholz Scale of Social Maturity for Use with Preschool Blind Children was used in this study (see Appendix A). At the present time the Maxfield-Buchholz Scale is the only known instrument for use with preschool blind children that compares developmental levels with other children who are blind. This scale is administered by means of a structured interview with a parent and information received is reinforced by observation of the child's behavior.

Ninety-five items in seven developmental categories were placed within the year level of expected performance from 0-1 year to 5-6 years. The seven areas observed were:

1. Self-help general (Example: Supporting head, sitting, grasping, differentiating between pretend and fact.)
2. Self-help dressing
3. Self-help eating
4. Communication
5. Locomotion

6. Socialization

7. Occupation (Example: Preference of activities, planfulness, attention span.)

A profile was obtained by using this year level-area information and the resulting score was given as a social age in years and decimals of years. The items were scored on what the child habitually does and not on occasional behavior.

The Maxfield-Buchholz Scale is an adaptation of Doll's Vineland Social Maturity Scale. It is not an intelligence test, but an inventory of the social competence of the young blind child with the level of expectancy based on the performance of other blind children in the same age range.

The authors state that the categories are not mutually exclusive but are expected to place emphasis on the various elements of child development.

In addition to a calculated social age, a social quotient was also obtained ($\frac{S.A.}{C.A.} = S.Q.$) Maxfield and Buchholz urge that this social quotient, defined as "the relationship between C.A. and S.A. just as the I.Q. stands for the relationship between C.A. and M.A.," be interpreted with caution not only because of the many variables of environment but also because of the fallibility of any quantitative measure for very young children.

The Maxfield-Buchholz Scale has never left the experimental stage and, therefore, there has been no data confirming validity and

reliability.

The Parent Attitude Research Instrument (PARI) developed by Schaefer and Bell of the National Institute of Mental Health was used in this study to assess the feelings of the mothers toward child rearing (see Appendix B). This instrument, although not designed specifically for parents of children who are blind, has the advantages of verified reliability and validity and extensive use in recent research. The authors (Schaefer and Bell) suggested that "logically, psychologically and empirically homogeneous scales of attitude toward child-rearing will be useful in investigating theories of the influence of maternal attitudes upon development of the child."¹

Coopersmith, in his NIMH-supported research on self-esteem, used an eighty-item questionnaire taken from the more extensive original PARI of 125 items.² This eighty-item scale encompasses fourteen subscales divided into the three major units of democracy-domination, acceptance-rejection, and indulgence-autonomy. It is this shorter scale that was used in this study. The eighty items are arranged in cyclical order. Of the fourteen subscales, two contain ten items each and the other twelve contain five items each.

¹Schaefer and Bell, "Development of a PARI."

²Coopersmith, Antecedents of Self-Esteem.

Democracy-Domination (25)

1. Encouraging verbalization (5)
2. Excluding outside influence (5)
3. Equalitarianism (10)
4. Comradeship and sharing (5)

Acceptance-Rejection (25)

5. Breaking the will (5)
6. Irritability (5)
7. Rejection of homemaking role (5)
8. Avoidance of communication (5)
9. Dependency of mother (5)

Indulgence-Autonomy (30)

10. Acceleration of development (10)
11. Strictness (5)
12. Intrusiveness (5)
13. Fostering dependency (5)
14. Approval of activity (5)

The authors recommend the person completing the PARI questionnaire work rapidly to give their first reaction, estimate the administration time to be approximately twenty minutes, and suggest the mother be permitted to complete this scale in the privacy of her own home.

The items require that the respondent indicate agreement or disagreement with statements bearing upon attitudes and practices

relating to child rearing. Four degrees of opinion were indicated in the scale: "A" - strongly agree, "a" - mildly agree, "d" - mildly disagree, and "D" - strongly disagree.

For the purpose of this study, parental attitudes were reported in relation to a continuum between the two poles of each of the three major units. Thus, a parent would be described as "strongly democratic" or "slightly dominant," rather than being assigned a specific score.

Methods

Through the cooperation of the Department of Rehabilitation, Services for the Blind, letters were mailed to all known parents of preschool blind children in Colorado. This letter (see Appendix C), requesting participation of the parents in learning more about the needs of the young blind child, was mailed by Services for the Blind, along with their cover letter (see Appendix C) indicating the approval of the Services for the Blind. A card (see Appendix C) to be signed and returned indicating the parental permission for an interview was also included in this initial contact letter.

Follow-up of families not responding was made through Services for the Blind.

Individual home visits were made to administer the Maxfield-Buchholz Scale and the attitude scale. Each visit took

approximately one to one and one-half hours. Observation of the child's behavior and informal discussion with the parent regarding the child's general development were included.

The PARI was mailed to the mother after the home visit.

Treatment of Data

After the data were collected, they were tabulated and summarized.

This study was a cross-section description of a present situation rather than longitudinal.

Because of the small number of subjects it was, of necessity, a descriptive study rather than statistical.

CHAPTER IV

RESULTS

Introduction

Of the thirty-seven families known to the Department of Services for the Blind in Colorado and contacted for this study, twenty-four responded and were interviewed, four did not respond, and nine could not be located at the last known address. Three of the twenty-four families contacted were not included in this study because the children were either presently enrolled in a school program or had been institutionalized.

The remaining twenty-one children are described.

Data collected in this study were compiled according to the following subdivisions of the investigation:

1. Chronological age at time of interview.
2. Sex.
3. Position in family by birth order.
4. Etiology as reported by parents.
5. Degree of vision--totally blind or partially sighted.
6. Maxfield-Buchholz Scale of Social Maturity findings.
 - a) Each of the seven developmental areas.
 - b) Social age.
 - c) Social quotient.

7. Parent Attitude Research Instrument findings.

a) Each of the three units of parental attitudes.

Data from the three major divisions of the study--background information from the home interview, Maxfield-Buchholz Social Maturity Scale results and PARI findings--are first presented in tabular form (see Tables 1, 2, and 3).

Results of each of the subscales within these three divisions are presented after the major tables.

TABLE 1
BACKGROUND INFORMATION^a

Child	: C.A.	: Sex	:	Position in: Family	Etiology	: Vision
1	: 4.08	: M	:	6 of 6	: Optic atrophy	: T
2	: 5.0	: M	:	6 of 8	: Unknown	: P
3	: 3.42	: M	:	3 of 3	: Unknown	: P
4	: 1.42	: M	:	5 of 5	: Optic atrophy	: T
5	: 5.75	: M	:	2 of 4	: Unknown	: T
6	: 2.58	: F	:	3 of 3	: Optic atrophy	: T
7	: 2.25	: M	:	1 of 1	: Optic atrophy	: P
8	: 2.00	: F	:	2 of 3	: Congenital	:
	:	:	:		: cataracts	: P
9	: 2.83	: F	:	2 of 3	: Tumor	: T
10	: 7.92	: M	:	3 of 3	: Rubella	: P
11	: 3.50	: M	:	1 of 1	: Prenatal "virus"	: T
12	: 3.0	: M	:	3 of 3	: Retrolental fibro-	:
	:	:	:		: plasia and	:
	:	:	:		: glaucoma	: T
13	: 4.83	: M	:	3 of 3	: Hemorrhage during	:
	:	:	:		: birth	: P
14	: 2.08	: M	:	2 of 2	: Congenital absence	:
	:	:	:		: of eyes	: T
15	: 2.92	: M	:	2 of 2	: Rubella	: P
16	: 7.5	: M	:	1 of 2	: Prenatal "virus"	: P
17	: 4.33	: F	:	4 of 4	: Prenatal "virus"	: T
18	: 2.83	: M	:	2 of 2	: Rubella	: P
19	: 5.33	: M	:	2 of 2	: Prenatal "virus"	: P
20	: 3.67	: F	:	4 of 4	: Congenital absence	:
	:	:	:		: of iris and	:
	:	:	:		: glaucoma	: P
21	: 5.08	: F	:	3 of 3	: Optic nerve	:
	:	:	:		: "incomplete"	: T

^aC.A. in decimals; T = totally blind; P = partially sighted.

TABLE 2
MAXFIELD-BUCHHOLZ SCALE

Child	General	Dressing	Eating	Communication	Locomotion	Socialization	Occupation	Social Age	$\frac{S.A.}{C.A.} =$ Social Quotient
1	V-VI (+)	IV-V (L)	III (-)	VI (+)	IV (L)	IV-V (L)	IV (L)	4.54	$\frac{4.54}{4.08} = 111$
2	IV (-)	IV-V (-)	IV (-)	III (-)	V (L)	IV-V (-)	IV-V (-)	4.23	$\frac{4.23}{5.0} = 85$
3	V-VI (+)	VI (+)	IV (+)	VI (+)	V (+)	VI (+)	VI (+)	5.63	$\frac{5.63}{4.53} = 164$
4	0-I (-)	0 (-)	I-II (L)	0 (-)	0 (-)	I (-)	0-I (-)	0.55	$\frac{0.55}{1.42} = 39$
5	V-VI (L)	V (-)	V (-)	III-IV (-)	V (-)	III-IV (-)	II-III (-)	3.20	$\frac{3.20}{5.75} = 56$
6	II-III (L)	II-III (L)	I-II (-)	I-II (-)	I-II (-)	II (-)	I (-)	1.76	$\frac{1.76}{2.58} = 68$
7	III (+)	IV (+)	IV (+)	III-IV (+)	III (+)	III-IV (+)	III (+)	3.40	$\frac{3.40}{2.25} = 151$

TABLE 2--Continued

Child	Gen- eral	Dress- ing	Eating	Com- muni- cation	Loco- motion	Social- ization	Occupa- tion	Social Age	$\frac{S.A.}{C.A.} =$ Social Quotient
8	III (+)	II-III (+)	IV (+)	II-III (+)	III-IV (+)	III (+)	III (+)	3.00	$\frac{3.0}{2.0} = 150$
9	I-II (-)	0 (-)	I-II (-)	I (-)	III (L)	0-I (-)	0-I (-)	1.32	$\frac{1.32}{2.83} = 47$
10	II (-)	II-III (-)	I-II (-)	I-II (-)	III (-)	II (-)	0-I (-)	2.02	$\frac{2.02}{7.92} = -26$
11	II-III (-)	II-III (-)	I-II (-)	0-I (-)	III-IV (L)	I (-)	0-I (-)	2.00	$\frac{2.0}{3.5} = 57$
12	IV (+)	III (L)	III (L)	III-IV (+)	III-IV (+)	IV (+)	III (L)	3.33	$\frac{3.33}{3.0} = 111$
13	V-VI (+)	V-VI (+)	VI (+)	VI (+)	VI (+)	VI (+)	VI (+)	5.53	$\frac{5.53}{4.83} = 114$
14	I-II (-)	II-III (+)	III (+)	II-III (+)	II (L)	II (L)	II-III (+)	2.12	$\frac{2.12}{2.08} = 102$
15	II (-)	II (-)	I-II (-)	I-II (-)	I-II (-)	I (-)	II-III (L)	1.78	$\frac{1.78}{2.92} = 61$
16	V (-)	IV-V (-)	IV (-)	IV (-)	IV (-)	IV-V (-)	IV (-)	4.30	$\frac{4.30}{7.5} = -57$

TABLE 2--Continued

Child	:	Gen- eral	Dress- ing	Eating	Com- muni- cation	Loco- motion	Social- ization	Occupa- tion	Social Age	:	$\frac{S.A.}{C.A.} =$ Social Quotient
17	:	V-VI (+)	V-VI (+)	VI (+)	VI (+)	VI (+)	VI (+)	VI (+)	5.53	:	$\frac{5.53}{4.33} = 128$
18	:	I-II (-)	I-II (-)	I-II (-)	0-I (-)	II (-)	0-I (-)	0-I (-)	1.35	:	$\frac{1.35}{2.83} = 48$
19	:	V (L)	VI (+)	V (L)	V (L)	IV (-)	IV-V (-)	IV-V (-)	5.23	:	$\frac{5.23}{5.33} = 98$
20	:	V-VI (+)	V-VI (+)	IV (+)	V (+)	V (+)	IV-V (+)	V (+)	5.07	:	$\frac{5.07}{3.67} = 138$
21	:	V-VI (+)	IV-V (-)	III (-)	III-IV (-)	IV (-)	IV-V (-)	IV (-)	4.35	:	$\frac{4.35}{5.08} = 86$

Notes:

Roman numerals indicate year level of achievement.
 + indicates achievement above expected level.
 - indicates achievement below expected level.
 L indicates achievement at expected level.

TABLE 3

PARENT ATTITUDE RESEARCH INSTRUMENT

Child	:	Democracy- Domination	:	Acceptance- Rejection	:	Indulgence Autonomy
1.	:	Strongly democratic	:	Nearly equal	:	Strongly favors autonomy
2.	:	Strongly democratic	:	Mildly accepting	:	Strongly indulgent
3.	:	Mildly democratic	:	Mildly rejecting	:	Equal
4.	:	Mildly democratic	:	Equal	:	Strongly indulgent
5.	:	Mildly democratic	:	Mildly accepting	:	Nearly equal
6.	:	Nearly equal	:	Strongly rejecting	:	Strongly favors autonomy
7.	:	Strongly democratic	:	Nearly equal	:	Mildly indulgent
8.	:	Mother died during study	:		:	
9.	:	Strongly democratic	:	Mildly rejecting	:	Equal
10.	:	Strongly democratic	:	Strongly accepting	:	Mildly indulgent
11.	:	Strongly democratic	:	Strongly accepting	:	Strongly indulgent

TABLE 3--Continued

Child	:	Democracy- Domination	:	Acceptance- Rejection	:	Indulgence- Autonomy
	:		:		:	
12.	:	Strongly democratic	:	Strongly accepting	:	Nearly equal
13.	:	Strongly democratic	:	Strongly accepting	:	Mildly indulgent
14.	:	Mildly democratic	:	Mildly accepting	:	Mildly indulgent
15.	:	Strongly democratic	:	Nearly equal	:	Mildly indulgent
16.	:	Strongly democratic	:	Strongly accepting	:	Mildly indulgent
17.	:	Nearly equal	:	Mildly accepting	:	Nearly equal
18.	:	Strongly democratic	:	Mildly rejecting	:	Nearly equal
19.	:	No response	:	No response	:	No response
20.	:	Strongly democratic	:	Strongly accepting	:	Strongly autonomous
21.	:	Strongly democratic	:	Mildly accepting	:	Equal
	:		:		:	

Background Information

Range in chronological age at the time of testing of the twenty-one children was 1.42 years to 7.92 years as shown in Table 5.

TABLE 5
DISTRIBUTION OF CHILDREN BY AGE

Year	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	N
Children	0	1	7	4	3	4	0	2	21

Fourteen of the twenty-one children were born during the fall and winter months, September through February, and seven children were born during spring and summer, March through August (see Table 6). There appeared to be no concentration of births of children who were blind during any one year. The low number of children born since 1965 is presumably due to a lag in identifying these children and in providing preschool services to families of very young blind children.

TABLE 6
DISTRIBUTION OF BIRTHDATE BY MONTH AND BY YEAR

Month	Year							
	: 1960	: 1961	: 1962	: 1963	: 1964	: 1965	: 1966	: Total
January	: 1	: :	: :	: 1	: :	: :	: :	: 2
February	: :	: :	: 1	: :	: :	: 2	: :	: 3
March	: :	: :	: :	: :	: :	: :	: :	: 0
April	: :	: :	: :	: :	: 1	: 1	: :	: 2
May	: :	: :	: :	: :	: 1	: :	: :	: 1
June	: 1	: :	: :	: :	: :	: :	: 1	: 2
July	: :	: :	: :	: 1	: 1	: :	: :	: 2
August	: :	: :	: :	: :	: :	: :	: :	: 0
September	: :	: :	: :	: :	: :	: 1	: :	: 1
October	: :	: :	: 1	: 1	: :	: 1	: :	: 3
November	: :	: :	: 2	: :	: :	: 1	: :	: 3
December	: :	: :	: :	: :	: 2	: :	: :	: 2
Total	: 2	: 0	: 4	: 3	: 5	: 6	: 1	: 21

Sex

The total of fifteen boys and six girls was not inconsistent with the general pattern of visual impairment among children (see Table 7).

TABLE 7

DISTRIBUTION OF CHILDREN BY SEX AND YEAR OF BIRTH

Sex	Year							Total
	1960	1961	1962	1963	1964	1965	1966	
Male	2	0	3	2	4	3	1	15
Female	0	0	1	1	1	3	0	6
Total	2	0	4	3	5	6	1	21

Position in family

Of the three first-born children, two were only children and one was the oldest child of two. Four children had both older and younger siblings. Fourteen children were the last-born children in the family. Four of these fourteen last-born children were fourth, fifth, or sixth children, two were third children born to mothers who have since lost their husbands, two were born to mothers now physically unable to have more children, and the remaining six are second or third children of young mothers presumably able to bear other children if they desire (see Table 8).

TABLE 8
FREQUENCY OF BIRTH POSITION WITHIN FAMILY UNIT

1st Child	:	2nd Child	:	3rd Child	:	4th Child	:	5th Child	:	6th Child	:	Total
3	:	7	:	6	:	2	:	1	:	2	:	21

Etiology

The etiology was recorded according to the mother's description during the home interview. Medical records were not investigated separately since these children were all listed on the official records of the Colorado Services for the Blind as being legally blind (see Table 9).

TABLE 9

ETIOLOGY

Description	:	Number
Congenital absence of eyes	:	1
Congenital cataracts	:	1
Congenital glaucoma and absence of iris	:	1
Hemorrhage (perinatal)	:	1
Optic atrophy	:	5
Retrolental fibroplasia	:	1
Rubella and "virus" during prenatal period	:	7
Tumors	:	1
Unknown	:	3
Total	:	21

Vision

Vision was described as either totally blind (T) or partially sighted (P).

The term "partially sighted" indicated there was believed to be some useful vision beyond light perception but the degree could not be determined at an early age. However, it was estimated by ophthalmologists to be within the limits of the legal definition of blindness (see Table 10).

TABLE 10
DEGREE OF VISION

Children	:	Totally Blind	:	Partially Sighted	:	Total
Boys	:	6	:	9	:	15
Girls	:	4	:	2	:	6
Total	:	10	:	11	:	21

Totally blind and partially sighted children were evenly distributed within the age levels (see Table 11).

TABLE 11
DEGREE OF VISION DISTRIBUTION BY AGE LEVELS

Age Level (yrs.)	:	Totally Blind	:	Partially Sighted	:	Total
1-2	:	1	:	0	:	1
2-3	:	3	:	4	:	7
3-4	:	2	:	2	:	4
4-5	:	2	:	1	:	3
5-6	:	2	:	2	:	4
6-7	:	0	:	0	:	0
7-8	:	0	:	2	:	2
Total	:	10	:	11	:	21

Maxfield Buchholz Scale

The seven areas of social maturity included in the Maxfield-Buchholz Scale were evaluated by viewing each child's test profile to determine whether the child was performing above, below, or at the expected level of behavior for his age.

Children at the 1-2 year age level and at the 7-8 year age level experienced general retardation in all areas, with one exception. As there were no other children in their age groups, their performance was recorded but should not be interpreted as typical development for their level. There were no children in the 6-7 year level or in the 0-1 year level. Thus, for comparative purposes, performance of children from two to six years of age is described.

General development

The term "general development" encompassed such areas as sitting, rolling over, grasping objects, avoiding simple hazards, and using intermediary objects as implements (see Table 12).

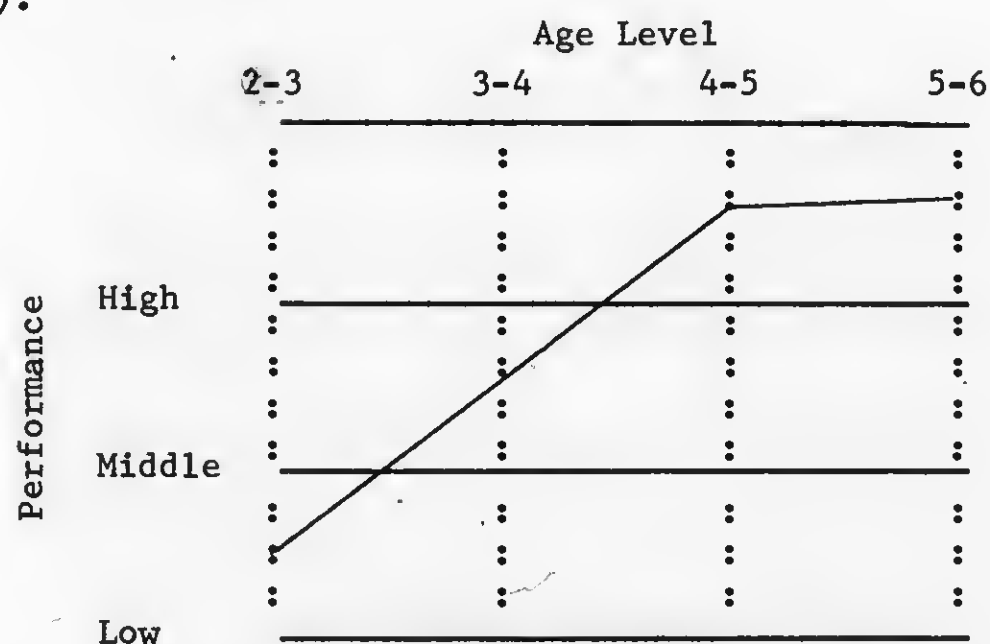
TABLE 12

GENERAL DEVELOPMENT AREA OF MAXFIELD-BUCHHOLZ SCALE

C.A. (yrs.)	:	Below	:	Expected Level	:	Above	:	Total
1-2	:	1	:		:	2	:	1
2-3	:	4	:	1	:	2	:	7
3-4	:	1	:		:	3	:	4
4-5	:	0	:		:	3	:	3
5-6	:	1	:	2	:	1	:	4
6-7	:	0	:	0	:	0	:	0
7-8	:	2	:		:		:	2
Total	:	9	:	3	:	9	:	21

Children in the 2-3 year age level experienced their greatest difficulty in this area, and in socialization, while the 5-6 year olds were considerably more successful in general development than they were in any of the other six areas of measurement.

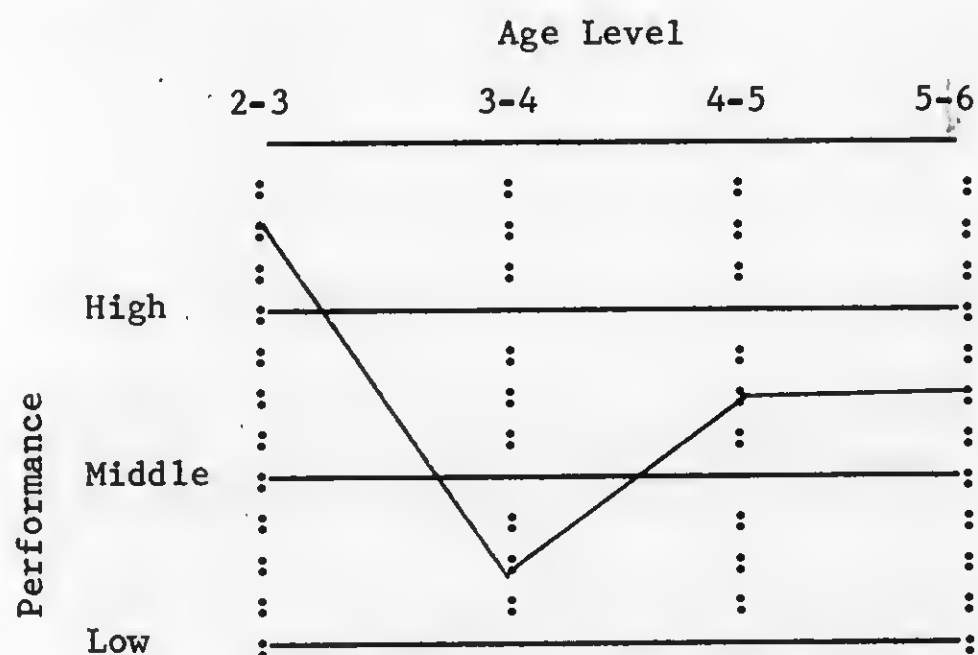
The area of general development showed a steady progression in performance from the 2-year level through the 6-year level with the 3-4 year olds placing this in the middle range of their achievement, and the 4-5 year olds showing this category with communication for their highest achievement (see Graph 1).



Graph 1.--General Development, Maxfield-Buchholz Scale.

Dressing

The 2-3 year age scored highest in dressing (and occupation) while this category dropped to last in the 3-4 year level (with occupation and eating). Both the 4-5 and 5-6 year children placed dressing skills within the middle range of achievement (see Graph 2 and Table 13).



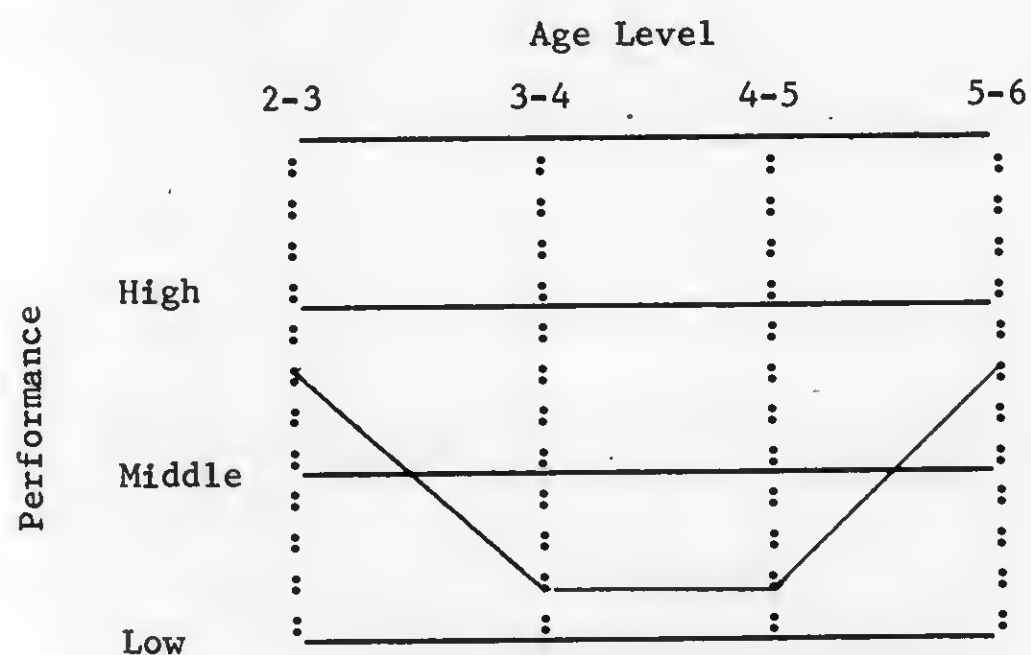
Graph 2.--Dressing, Maxfield-Buchholz Scale.

TABLE 13
DRESSING, MAXFIELD-BUCHHOLZ SCALE

C.A. (yrs.)	:	Below	:	Expected Level	:	Above	:	Total
1-2	:	1	:		:		:	1
2-3	:	3	:	1	:	3	:	7
3-4	:	1	:	1	:	2	:	4
4-5	:		:	1	:	2	:	3
5-6	:	3	:		:	1	:	4
6-7	:	0	:	0	:	0	:	0
7-8	:	2	:		:		:	2
Total	:	10	:	3	:	8	:	21

Eating

This is the only area in which the child in the 1-2 year age reached expected level and, conversely, eating was the only area any of the 4-5 year children scored below expected level. It also was one of the lowest areas for the 3-4 year olds. For both the 2-3 and 5-6 year ages, eating was a middle ranking achievement (see Graph 3 and Table 14).



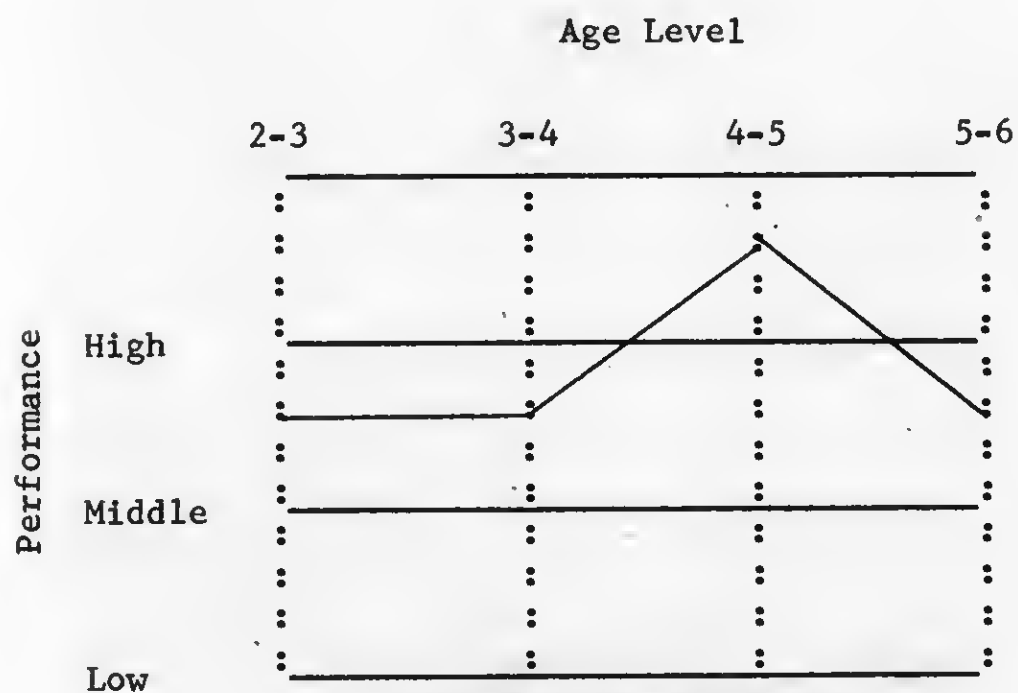
Graph 3.--Eating, Maxfield-Buchholz Scale.

TABLE 14
EATING, MAXFIELD-BUCHHOLZ SCALE

C.A. (Yrs.)	:	Below	:	Expected Level	:	Above	:	Total
1-2	:		:	1	:		:	1
2-3	:	4	:		:	3	:	7
3-4	:	1	:	1	:	2	:	4
4-5	:	1	:		:	2	:	3
5-6	:	3	:	1	:		:	4
6-7	:	0	:	0	:	0	:	0
7-8	:	2	:		:		:	2
Total	:	11	:	3	:	7	:	21

Communication

Communication was a middle ranking achievement for the 2-3, 3-4, and 5-6 year children, but it ranked highest (with general) on the 4-5 year level (see Graph 4 and Table 15).



Graph 4.--Communication,
Maxfield-Buchholz Scale.

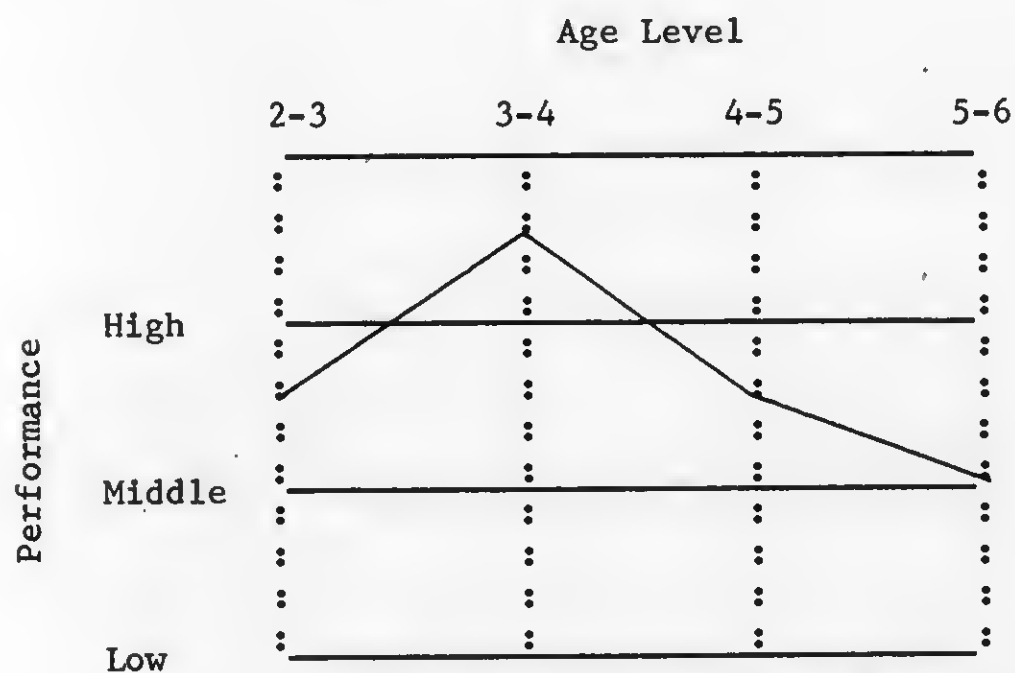
TABLE 15

COMMUNICATION, MAXFIELD-BUCHHOLZ SCALE

C.A. (Yrs.)	Below	Expected Level	Above	Total
1-2	1			1
2-3	4		3	7
3-4	1		3	4
4-5			3	3 ^o
5-6	3	1		4
6-7	0	0	0	0
7-8	2			2
Total	11	1	9	21

Locomotion

Locomotive skills were more pronounced during the earlier years, scoring near the top at 2-3 years and first at 3-4 years. Then from 4-5 through 5-6 years, this category dropped to the middle and low middle range (see Graph 5 and Table 16).



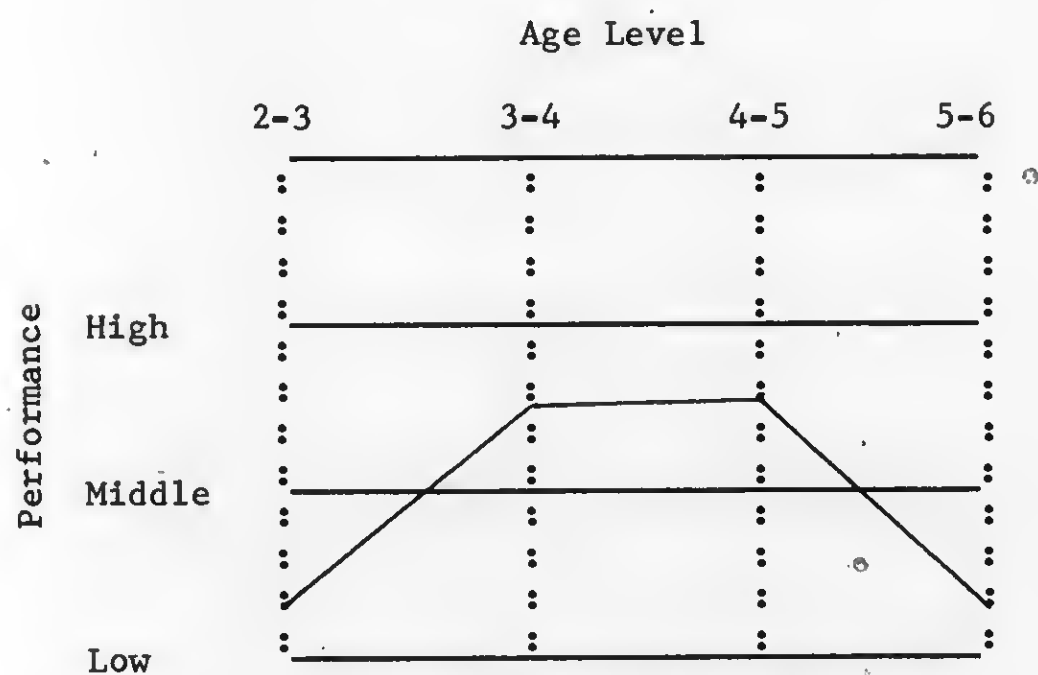
Graph 5.--Locomotion, Maxfield-Buchholz Scale.

TABLE 16
LOCOMOTION, MAXFIELD-BUCHHOLZ SCALE

C.A. (Yrs.)	:	Below	:	Expected Level	:	Above	:	Total
1-2	:	1	:		:		:	1
2-3	:	3	:	2	:	2	:	7
3-4	:		:	1	:	3	:	4
4-5	:	0	:	1	:	2	:	3
5-6	:	3	:	1	:		:	4
6-7	:	0	:	0	:	0	:	0
7-8	:	2	:		:		:	2
Total	:	9	:	5	:	7	:	21

Socialization

Socialization ranked lowest in the 2-3 and 5-6 year levels and in the middle range for 3-4 and 4-5 year olds. It exchanged rankings with eating within these same age levels (see Graph 6 and Table 17).



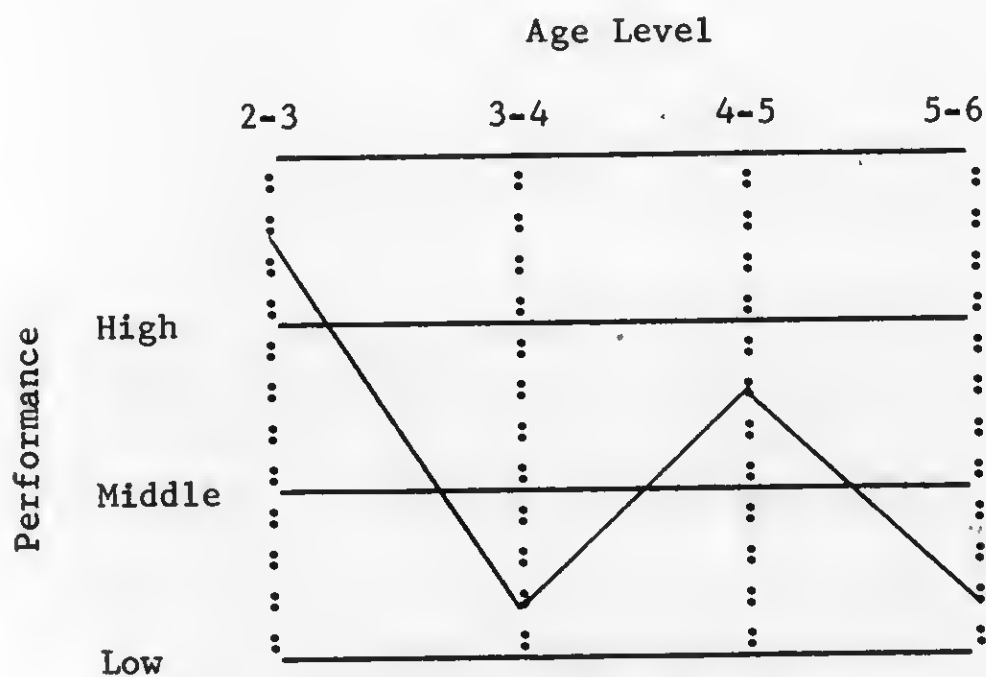
Graph 6.--Social, Maxfield-Buchholz Scale.

TABLE 17
SOCIALIZATION, MAXFIELD-BUCHHOLZ SCALE

C.A. (Yrs.)	:	Below	:	Expected Level	:	Above	:	Total
1-2	:	1	:		:		:	1
2-3	:	4	:	1	:	2	:	7
3-4	:	1	:		:	3	:	4
4-5	:		:	1	:	2	:	3
5-6	:	4	:		:		:	4
6-7	:	0	:	0	:	0	:	0
7-8	:	2	:		:		:	2
Total	:	12	:	2	:	7	:	21

Occupation

Occupation shared highest scores with dressing at the 2-3 year level and dropped to lowest place, with socialization, at the 5-6 year level. This category followed the same pattern as dressing from 2-5 years, ranking from highest at 2-3 years to lowest at 3-4 years and then to middle range at 4-5 years (see Graph 7 and Table 18).



Graph 7.--Occupation,
Maxfield-Buchholz Scale.

TABLE 18
OCCUPATION, MAXFIELD-BUCHHOLZ SCALE

C.A. (Yrs.)	:	Below	:	Expected Level	:	Above	:	Total
1-2	:	1	:		:		:	1
2-3	:	3	:	1	:	3	:	7
3-4	:	1	:	1	:	2	:	4
4-5	:		:	1	:	2	:	3
5-6	:	4	:		:		:	4
6-7	:	0	:	0	:	0	:	0
7-8	:	2	:		:		:	2
Total	:	11	:	3	:	7	:	21

Explanation of performance
by year level

Distribution of performance in all areas of the Maxfield-Buchholz Scale is shown in Tables 19 through 26. There were no children in the 0-1 year level and in the 6-7 year level.

TABLE 19
PERFORMANCE OF 1-2 YEAR OLD CHILDREN,
MAXFIELD-BUCHHOLZ SCALE

Area	:	Below	:	Expected Level	:	Above	:	Total
General	:	1	:		:		:	1
Dressing	:	1	:		:		:	1
Eating	:		:	1	:		:	1
Communication	:	1	:		:		:	1
Locomotion	:	1	:		:		:	1
Socialization	:	1	:		:		:	1
Occupation	:	1	:		:		:	1
<hr/>								
Total levels of achievement	:	6	:	1	:	0	:	7

TABLE 20
PERFORMANCE OF 2-3 YEAR OLD CHILDREN,
MAXFIELD-BUCHHOLZ SCALE

Area	:	Below	:	Expected Level	:	Above	:	Total
	:		:		:		:	
General	:	4	:	1	:	2	:	7
Dressing	:	3	:	1	:	3	:	7
Eating	:	4	:	0	:	3	:	7
Communication	:	4	:	0	:	3	:	7
Locomotion	:	3	:	2	:	2	:	7
Socialization	:	4	:	1	:	2	:	7
Occupation	:	3	:	1	:	3	:	7
Total levels of achievement	:	25	:	6	:	18	:	49

TABLE 21
 PERFORMANCE OF 3-4 YEAR OLD CHILDREN,
 MAXFIELD-BUCHHOLZ SCALE

Area	:	:	:	:	:	:		
	:	Below	:	Expected Level	:	Above	:	Total
General	:	1	:	0	:	3	:	4
Dressing	:	1	:	1	:	2	:	4
Eating	:	1	:	1	:	2	:	4
Communication	:	1	:	0	:	3	:	4
Locomotion	:	0	:	1	:	3	:	4
Socialization	:	1	:	0	:	3	:	4
Occupation	:	1	:	1	:	2	:	4
Total levels of achievement	:	6	:	4	:	18	:	28

TABLE 22
PERFORMANCE OF 4-5 YEAR OLD CHILDREN,
MAXFIELD-BUCHHOLZ SCALE

Area	:	Below	:	Expected Level	:	Above	:	Total
Genral	:	0	:	0	:	3	:	3
Dressing	:	0	:	1	:	2	:	3
Eating	:	1	:	0	:	2	:	3
Communication	:	0	:	0	:	3	:	3
Locomotion	:	0	:	1	:	2	:	3
Socialization	:	0	:	1	:	2	:	3
Occupation	:	0	:	1	:	2	:	3
Total levels of achievement	:	1	:	4	:	16	:	21

TABLE 23
 PERFORMANCE OF 5-6 YEAR OLD CHILDREN,
 MAXFIELD-BUCHHOLZ SCALE

Area	:	Below	:	Expected Level	:	Above	:	Total
General	:	1	:	2	:	1	:	4
Dressing	:	3	:	0	:	1	:	4
Eating	:	3	:	1	:	0	:	4
Communication	:	3	:	1	:	0	:	4
Locomotion	:	3	:	1	:	0	:	4
Socialization	:	4	:	0	:	0	:	4
Occupation	:	4	:	0	:	0	:	4
Total levels of achievement	:	21	:	5	:	2	:	28

The Maxfield-Buchholz Scale extends only to the six-year level. These two children were included in the description, however, because their level of achievement was below six years and because they were not enrolled in a school program (see Table 24).

TABLE 24
PERFORMANCE OF 7-8 YEAR OLD CHILDREN,
MAXFIELD-BUCHHOLZ SCALE

Area	:	Below	:	Expected Level	:	Above	:	Total
General	:	2	:		:		:	2
Dressing	:	2	:		:		:	2
Eating	:	2	:		:		:	2
Communication	:	2	:		:		:	2
Locomotion	:	2	:		:		:	2
Socialization	:	2	:		:		:	2
Occupation	:	2	:		:		:	2
Total levels of achievement	:	14	:	0	:	0	:	14

TABLE 25
RELATIVE RANKINGS OF MAXFIELD-BUCHHOLZ SCALE CATEGORIES
BY TWO TO SIX YEAR OLD CHILDREN

Rank	2-3 Years	3-4 Years	4-5 Years	5-6 Years
1.0		Locomotion		General
1.5	Occupation Dressing		General Communication	
2.0				Dressing
3.0	Locomotion	General Communication Socialization		
4.0				Locomotion Communication Eating
4.5	Communication Eating		Locomotion Occupation Dressing Socialization	
6.0		Occupation Dressing Eating		
6.5	Socialization General			Socialization Occupation
7.0		Eating		

Compared with the Maxfield-Buchholz Scale age level expectations, the preschool blind children in Colorado as a group performed at highest level in the areas of Locomotion and General Development and at lowest level of behavior in Socialization.

TABLE 26

LEVELS OF ACHIEVEMENT BY ALL AGES IN
MAXFIELD-BUCHHOLZ CATEGORIES

Area	:	Below Expected Level	:	At or Above Expected Level	:	Total
Locomotion	:	9	:	12	:	21
General	:	9	:	12	:	21
Dressing	:	10	:	11	:	21
Eating	:	11	:	10	:	21
Communication	:	11	:	10	:	21
Occupation	:	11	:	10	:	21
Socialization	:	12	:	9	:	21
Total of levels	:	73	:	74	:	147

Social age

The social age equivalent obtained from the Maxfield-Buchholz Scale is reported in years and decimals of years in Table 27.

Social age ranged from .55 years to 5.63 years.

The ceiling of the Maxfield-Buchholz Scale is 6 years.

Although two of the children (No. 10 and No. 16) were above the 6-year level in chronological age, their social maturity was recorded at less than 5 years. As these children were not enrolled in a school program, they were included under the preschool definition and limitations.

TABLE 27
DISTRIBUTION OF SOCIAL AGES,
MAXFIELD-BUCHHOLZ SCALE

Child		Social Age
3	.....	5.63
17	.....	5.53
13	.....	5.53
19	.....	5.23
20	.....	5.07
1	.....	4.54
21	.....	4.35
16	.....	4.30
2	.....	4.23
7	.....	3.40
12	.....	3.33
5	.....	3.20
8	.....	3.00
14	.....	2.12
10	.....	2.02
11	.....	2.00
15	.....	1.78
6	.....	1.76
18	.....	1.35
9	.....	1.32
4	.....	0.55

Chronological age

Nine of the twenty-one children were evaluated as performing above the Maxfield Buchholz Scale expectancies for their chronological age and twelve children as below their chronological age level (see Table 28).

TABLE 28
DEVIATION OF SOCIAL AGE FROM CHRONOLOGICAL AGE

Child	:	C.A.	:	S.A.	:	Deviation
3	:	3.42	:	5.63	:	+2.21
20	:	3.67	:	5.07	:	+1.40
17	:	4.33	:	5.53	:	+1.20
7	:	2.25	:	3.40	:	+1.15
8	:	2.00	:	3.00	:	+1.00
13	:	4.83	:	5.53	:	+0.70
1	:	4.08	:	4.54	:	+0.46
12	:	3.00	:	3.33	:	+0.33
14	:	2.08	:	2.12	:	+0.04
19	:	5.33	:	5.23	:	+0.11
21	:	5.08	:	4.35	:	+0.73
2	:	5.00	:	4.23	:	-0.77
6	:	2.58	:	1.76	:	-0.82
4	:	1.42	:	0.55	:	-0.87
15	:	2.92	:	1.78	:	-1.14
18	:	2.83	:	1.35	:	-1.48
11	:	3.50	:	2.00	:	-1.50
9	:	2.83	:	1.32	:	-1.51
5	:	5.75	:	3.20	:	-2.55
16	:	7.50	:	4.30	:	-3.20
10	:	7.92	:	2.02	:	-5.90

Social quotient

The Maxfield-Buchholz Social Quotient is computed in the same manner as an I.Q. score--the social age divided by the chronological age--and is defined by the Maturity Scale authors as the relationship between chronological age and social age just as the intelligence quotient stands for the relationship between chronological age and mental age. Maxfield and Buchholz also stress that this quotient be interpreted cautiously but felt it had proven clinical value.

Because two of the children (No. 10 and No. 16) were above the six-year chronological age, it was felt this would depress their calculated social quotient. Thus, their reported scores were preceded by a minus sign (see Table 29).

The range of social quotients was from -26 to 164.

The same nine children, but in different order, estimated to be performing above the Maxfield-Buchholz Scale norms by social age classification, are also above these norms by social quotient definition.

TABLE 29
DISTRIBUTION OF SOCIAL QUOTIENTS,
MAXFIELD-BUCHHOLZ SCALE

Child		Social Quotient
3	.....	164
7	.....	151
8	.....	150
20	.....	138
17	.....	128
13	.....	114
1	.....	111
12	.....	111
14	.....	102
19	.....	98
21	.....	86
2	.....	85
6	.....	68
15	.....	61
11	.....	57
16	.....	-57
5	.....	56
18	.....	48
9	.....	47
4	.....	39
10	.....	-26

Parent Attitude Research Instrument

The PARI questionnaires were mailed to the twenty-one parents after the home interviews. Of the twenty-one questionnaires sent, nineteen were returned, one mother died during the study, and one mother did not respond.

The three major factors examined as underlying parental attitudes were those used by Coopersmith:

1. Democracy - Domination
2. Acceptance - Rejection
3. Indulgence - Autonomy

These factors were examined as continuum-type categories and reported in terms of strong, mild, nearly equal--or middle--positions in relation to the poles of each factor.

The situations these attitudes describe are presented in Table 30.

TABLE 30
PARENTS RESPONDING TO PARI QUESTIONNAIRE, CHILD'S
SOCIAL QUOTIENT, AND DEGREE OF VISION

Child	:	PARI	:	Vision	:	Social Quotient
	:		:		:	
3	:	x	:	P	:	164
7	:	x	:	P	:	151
8	:		:	P	:	150
20	:	x	:	P	:	138
17	:	x	:	T	:	128
13	:	x	:	P	:	114
1	:	x	:	T	:	111
12	:	x	:	T	:	111
14	:	x	:	T	:	102
19	:		:	P	:	98
21	:	x	:	T	:	86
2	:	x	:	P	:	85
6	:	x	:	T	:	68
15	:	x	:	P	:	61
11	:	x	:	T	:	57
16	:	x	:	P	:	-57
5	:	x	:	T	:	56
18	:	x	:	P	:	48
9	:	x	:	T	:	47
4	:	x	:	T	:	39
10	:	x	:	P	:	-26
	:		:		:	

5
From the total group of twenty-one families, PARI questionnaires were completed and returned by nineteen families.

The two children not represented--one girl and one boy--have some vision, are achieving near or above expected levels of performance, and live in counties outside the greater Denver area. Both are second children, one having an older sibling, the other having an older and a younger sibling.

Parental attitudes reported by the nineteen respondents are recorded in Tables 31, 32, and 33.

TABLE 31

DEMOCRACY-DOMINATION, PARENTAL ATTITUDE
RESEARCH INSTRUMENT

S. Democ.	:	M. Democ.	:	Mid.	:	M. Domin.	:	S. Domin.	:	Total
13	:	4	:	2	:	0	:	0	:	19

TABLE 32

ACCEPTANCE-REJECTION, PARENTAL ATTITUDE
RESEARCH INSTRUMENT

S. Accept.	:	M. Accept.	:	Mid.	:	M. Reject.	:	S. Reject.	:	Total
6	:	5	:	4	:	3	:	1	:	19

TABLE 33

INDULGENCE-AUTONOMY, PARENTAL ATTITUDE
RESEARCH INSTRUMENT

S. Indul.	:	M. Indul.	:	Mid.	:	M. Auton.	:	S. Auton.	:	Total
3	:	6	:	7	:	0	:	3	:	19

These three continua of parental attitude were compared with chronological age of the children. Parents of children older than 3.5 years reported more strongly democratic attitudes, were considerably more accepting, and showed little difference in attitudes of indulgence-autonomy than did parents of children younger than 3.5 years (see Table 34).

TABLE 34

PARENTAL ATTITUDES TOWARD CHILDREN YOUNGER THAN 3.5 YEARS AND OLDER THAN 3.5 YEARS

Less than 3.5 Years (N = 9)					:	3.5 Years or Older (N = 10)				
Democracy-Domination					:	Democracy-Domination				
S. Democ.	M. Democ.	Mid.	M. Domin.	S. Domin.	:	S. Democ.	M. Democ.	Mid.	M. Domin.	S. Domin.
5	3	1	0	0	:	8	1	1	0	0
Acceptance-Rejection					:	Acceptance-Rejection				
S. Accept.	M. Accept.	Mid.	M. Reject.	S. Reject.	:	S. Accept.	M. Accept.	Mid.	M. Reject.	S. Reject.
1	1	3	3	1	:	5	4	1	0	0
Indulgence-Autonomy					:	Indulgence-Autonomy				
S. Indul.	M. Indul.	Mid.	M. Auton.	S. Auton.	:	S. Indul.	M. Indul.	Mid.	M. Auton.	S. Auton.
1	3	4	0	1	:	2	3	3	0	2

Parents reported stronger feelings of Acceptance, Democracy, and Indulgence toward children having some sight than did parents of children having no sight (see Table 35).

TABLE 35

PARENTAL ATTITUDES TOWARD PARTIALLY SIGHTED AND TOTALLY BLIND CHILDREN

Partially Sighted (N = 9)					:	Totally Blind (N = 10)				
Democracy-Domination					:	Democracy-Domination				
S. Democ.	M. Democ.	Mid.	M. Domin.	S. Domin.	:	S. Democ.	M. Democ.	Mid.	M. Domin.	S. Domin.
8	1	0	0	0	:	5	3	2	0	0
Acceptance-Rejection					:	Acceptance-Rejection				
S. Accept.	M. Accept.	Mid.	M. Reject.	S. Reject.	:	S. Accept.	M. Accept.	Mid.	M. Reject.	S. Reject.
4	1	2	2	0	:	2	4	2	1	1
Indulgence-Autonomy					:	Indulgence-Autonomy				
S. Indul.	M. Indul.	Mid.	M. Auton.	S. Auton.	:	S. Indul.	M. Indul.	Mid.	M. Auton.	S. Auton.
1	5	2	0	1	:	2	1	5	0	2

Parental attitudes were examined in relation to their child's performance level. The PARI questionnaires of parents of the children who obtained a Maxfield-Buchholz Scale social quotient of 100 or above were compared with those of parents of children scoring lower than 100.

Attitudes toward Democracy were similar for both groups; parents of children at lower performance levels than expected of their age level reported a wider range of feelings in the acceptance-rejection continuum with a greater proportion rejecting than did parents of higher achieving children, and parents of higher achieving children reported no attitudes of strong indulgence and more strongly autonomous attitudes than did parents of lower achieving children (see Table 36).

TABLE 36

PARENTAL ATTITUDES TOWARD CHILDREN OF HIGHER AND LOWER ACHIEVEMENT LEVELS

Social Quotient Over 100 (N = 8)								:	Social Quotient Under 100 (N = 11)									
Democracy-Domination								:	Democracy-Domination									
S.	:	M.	:	Mid.	:	M.	:	S.	:	S.	:	M.	:	Mid.	:	M.	:	S.
Democ.	:	Democ.	:	Mid.	:	Domin.	:	Domin.	:	Democ.	:	Democ.	:	Mid.	:	Domin.	:	Domin.
5	:	2	:	1	:	0	:	0	:	8	:	2	:	1	:	0	:	0
Acceptance-Rejection								:	Acceptance-Rejection									
S.	:	M.	:	Mid.	:	M.	:	S.	:	S.	:	M.	:	Mid.	:	M.	:	S.
Accept.	:	Accept.	:	Mid.	:	Reject.	:	Reject.	:	Accept.	:	Accept.	:	Mid.	:	Reject.	:	Reject.
Indulgence-Autonomy								:	Indulgence-Autonomy									
S.	:	M.	:		:	M.	:	S.	:	S.	:	M.	:		:	M.	:	S.
Indul.	:	Indul.	:		:	Auton.	:	Auton.	:	Indul.	:	Indul.	:		:	Auton.	:	Auton.

Parental attitudes toward girls and toward boys were also examined. However, it must be noted that only five of the nineteen children were girls. Of these five girls, four were totally blind and one partially sighted. Although attitudes of acceptance and rejection were essentially the same for mothers of girls and mothers of boys, there were no attitudes of indulgence--either strong or mild--reported by mothers of girls, and these same mothers also showed less democratic attitudes toward their girls (see Table 37).

TABLE 37
PARENTAL ATTITUDES TOWARD GIRLS AND BOYS

Girls (N = 5)					:	Boys (N = 14)				
Democracy-Domination					:	Democracy-Domination				
S. Democ.	M. Democ.	Mid.	M. Domin.	S. Domin.	:	S. Democ.	M. Democ.	Mid.	M. Domin.	S. Domin.
3	0	2	0	0	:	10	4	0	0	0
Acceptance-Rejection					:	Acceptance-Rejection				
S. Accept.	M. Accept.	Mid.	M. Reject.	S. Reject.	:	S. Accept.	M. Accept.	Mid.	M. Reject.	S. Reject.
1	2	0	1	1	:	5	4	3	2	0
Indulgence-Autonomy					:	Indulgence-Autonomy				
S. Indul.	M. Indul.	Mid.	M. Auton.	S. Auton.	:	S. Indul.	M. Indul.	Mid.	M. Auton.	S. Auton.
0	0	3	0	2	:	3	6	4	0	1

CHAPTER V

SUMMARY, DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

This chapter includes (1) summarization of the study and (2) discussion with resulting (3) implications and (4) recommendations.

Summary

The total known population of preschool blind children in the state of Colorado was contacted in an attempt to identify and describe this group of children for whom there are no present preschool programs.

Twenty-four of the thirty-seven families were located and participated in a home interview and administration of the Maxfield-Buchholz Social Maturity Scale for Blind Preschool Children. Of the thirteen families not included in this study, nine could not be located and four did not respond. Three children of the twenty-four visited were found to be enrolled in a school program or institutionalized and the remaining

twenty-one children were included in this study. Nineteen of these twenty-one families also responded to the Parent Attitude Research Instrument

Data obtained from the home interview, Maxfield-Buchholz Scale, and PARI were tabulated and a summary of the results follows.

Home interview

A home interview gave an opportunity to observe the child, his behavior, and his interaction with his family in a situation that was familiar and as non-threatening as possible.

The following background information was also obtained:

1. Chronological age of the children, reported in decimal form at time of testing, ranged from 1.42 years to 7.92 years.
2. Distribution of children by age level at time of testing was:

1 at 1-2 year level

7 at 2-3 year level

4 at 3-4 year level

3 at 4-5 year level

4 at 5-6 year level

0 at 6-7 year level

2 at 7-8 year level

3. Two-thirds of the children were born during the fall and winter months (September through February) and one-third during spring and summer (March through August).

4. Distribution of children by year of birth was:

1 - 1966

6 - 1965

5 - 1964

3 - 1963

4 - 1962

0 - 1961

2 - 1960

and there appeared to be no concentration of births of children born in any one year. The small number of children since 1965 is presumably due to the lag caused by not learning of these children until the parents request assistance.

5. Distribution of children by sex was fifteen boys and six girls, or a ratio of $2\frac{1}{2}$ boys to each girl.
6. Distribution of children by birth rank within the family was three first-born children, fourteen last-born children, and four having both older and younger siblings. Birth position ranged from first child to sixth child.
7. Etiology was recorded as described by the mother.
All children were listed on the official records of the Colorado Services for the Blind. Most prevalent were rubella or virus during prenatal period (7) and optic atrophy (5). Congenital absence of eyes, congenital cataracts, congenital glaucoma, perinatal hemorrhage, retrolental fibroplasia, and tumors each had an incidence of one, and three were reported as unknown causes.
8. Total blindness was reported for ten children, six boys and four girls. Eleven children (nine boys and two girls) were believed to have some vision beyond light perception. However, because of their early age, exact degree of vision could not yet be determined.
9. Distribution of totally blind and partially sighted children was evenly divided within age levels.

• Maxfield-Buchholz Social
Maturity Scale

As a total unit, the preschool blind children in Colorado compared favorably with the Maxfield-Buchholz Scale norms.

Each of the twenty-one children was evaluated in seven different areas of social maturity, making a total of 147 units of evaluation ($21 \times 7 = 147$). The children performed at the Maxfield-Buchholz Scale expectancies for their age levels or higher on seventy-four of these units and below their age level on seventy-three units. These figures include the two seven-year-old children who were evaluated as performing below level in every category. If only the children up to six years of age, the Maxfield-Buchholz Scale ceiling, are evaluated, seventy-four of the 133 units were performed at or above age level expectancies and fifty-nine units below level.

One might note that this level of behavior was attained without excluding any children who had handicaps in addition to their blindness and in a state that has no preschool counseling programs for the blind.

On the basis of achievement by these twenty-one children as a total, their highest performance was in the areas of general development and locomotion, high middle range in dressing skills, low middle range in the categories of communication, eating, and occupation, and lowest in socialization.

Summarized results of each area of the Maxfield-Buchholz Scale are:

1. Achievement levels in all seven areas were evaluated primarily for ages two to six. There were no children at the 0-1 year level; at the 1-2 year level there was but one child. Two children were seven years old and although their performance was below the six-year ceiling of the Maxfield-Buchholz Scale, it was felt their scores would not be comparable. Thus, their achievement level was recorded but it was not compared with the 2-6 year levels.
2. General development progressed steadily from the lowest category at year 2-3 to the highest category at year 5-6. In over-all performance for the total group, general development ranked highest, with locomotion, in proficiency ratings.
3. Dressing dropped from highest category at 2-3 years to lowest at 3-4 years, then remained at mid-range from 4-6 years.
4. Eating was one of the categories, with socialization, that was consistently low at all age levels. Low middle range of achievement was recorded at both the 2-3 and 5-6 years and eating was ranked in the lowest area of performance during the intervening 3-4 and 4-5 year levels.

5. Communication remained in the middle range of proficiency at all levels except the 4-5 year age where it shared first place with general development.
6. Locomotion shared first place with general development in the total performance for all age levels, having the greatest number of children performing at or above the expected level of achievement. However, locomotive skills were more pronounced during years 2-4, then dropped to middle range at 4-5 years, and low middle range during 5-6 years.
7. Socialization was in the lowest category at 2-3 years, went up to middle range from 3-5 years and then back down to the bottom again at 5-6 years. Socialization and eating interchanged positions throughout the span from 2-6 years. This category was also lowest of the seven Maxfield-Buchholz Scale areas for the total number of children performing at or above expected levels of achievement.
8. Occupation dropped from first place (with dressing) at 2-3 years to last place (with dressing) at 3-4 years to middle range (with dressing) at 4-5 years, but at 5-6 year level it again dropped to last place while dressing climbed to second position.

9. In comparing Maxfield-Buchholz Scale Social Age scores with their chronological age, nine of the twenty-one children achieved a higher S.A. than C.A. and twelve children a lower S.A. than C.A.
10. Social Quotients above the Maxfield-Buchholz Scale norms were achieved by the same nine children having higher social ages and, accordingly, the same twelve children scored lower than the norms.

Parent Attitude Research
Instrument (PARI)

The reported attitudes of Democracy, Acceptance, and Indulgence were considerably stronger among mothers of children having some vision than were the recorded attitudes of mothers of children having no vision. This is understandable since severe visual loss is less difficult to accept than profound visual loss. Four of the five highest achieving children had some vision. Whether these children's performance levels are influenced more by degree of vision or by maternal attitude is difficult to determine.

Three of the twenty-one children were in families without fathers and all three children were functioning considerably below their age level expectancies. Two parents who recorded attitudes of rejection toward their children were of this group, but the third mother was rated as strongly accepting. All three children

are totally blind. This suggests that these three mothers may be facing a dual adjustment to children with profound visual loss as well as to the absence of a spouse.

Only two of the nine parents of children less than 3.5 years of age reported attitudes of acceptance, while nine of the ten parents of children 3.5 years of age and older expressed attitudes of acceptance. This dichotomy might be explained by the possibility that mothers of these older children had time in which to acquire helpful information about the rearing of children who are blind and the older children had time to demonstrate acquisition of skills.

Specific findings from the PARI indicate:

1. Nineteen of the twenty-one mothers responded to the PARI questionnaire; one mother died during the study; one mother did not respond.
2. None of the nineteen mothers reported attitudes of Dominance on the Democracy-Dominance continuum.
3. Parents of children 3.5 years and older reported stronger attitudes of Democracy and Acceptance than did parents of younger children.
4. Parents of children having some vision reported stronger feelings of Democracy, Acceptance, and Indulgence than did parents of totally blind children.

5. Parents of children performing at or above age level expectancies, according to the Maxfield-Buchholz Scale, indicated attitudes of greater acceptance, reported no attitudes of strong indulgence, and had more strongly autonomous attitudes than did parents of children performing below age level expectancies.
6. Parents of girls reported no attitudes of indulgence either strong or mild. However, there were only five girls of the total nineteen children represented by the PARI. These same five mothers also indicated less democratic attitudes than did mothers of boys. The three mothers reporting strongly indulgent attitudes were all mothers of boys.
7. There was no relationship evident between parental attitudes in any of the three areas examined and the child's birth position within the family.
8. Acceptance-Rejection attitudes were examined for relationship to Indulgence-Autonomy attitudes. There appeared to be no correlation of these attitudes for parents indicating varying degrees of acceptance and those at the mid-point of the continuum. However, none of the four mothers indicating rejection attitudes recorded indulgent attitudes.

Discussion

Blind children constitute one of the smallest areas of exceptionality, and although the twenty-one preschool blind children described in this study represent the total known population of this category within Colorado, it must be stressed that the information presented is a single cross section description of one population within one state.

It does seem to be within the limits of prudence, though, to hope that establishment of such a base line will facilitate future forms of action.

The twenty-one children in this study reside in only the eight counties that form a path from the Wyoming border south to Pueblo. Most likely young blind children residing throughout the rest of the state are neither known, nor have been sought. Yet, the greatest proportion of Colorado's population is also found in these same eight counties, as are the health services, and so it is conceivable that this group does constitute the total area of incidence. Distribution by county is: Larimer - 1, Weld - 2, Boulder - 5, Adams - 1, Jefferson - 2, Denver - 6, El Paso - 3, Pueblo - 1.

Only families residing in the greater Denver area (Adams, Denver, Jefferson, Boulder counties) reported knowing of or utilizing any counseling services or organizations for the blind. The seven families in the four counties most distant from Denver (Larimer, Weld, El Paso, Pueblo) reported no known services other than those

provided by county health and welfare offices or facilities such as hospitals in Denver. Of these seven children in the outlying counties, six were evaluated by this study as performing below their age level expectancies. Of the fourteen children in the greater Denver area, with limited services for the blind available, eight children were performing above age level expectancies and six below by criteria used in this study. Of the nine children having the highest social ages and social quotients as measured by the Maxfield-Buchholz Scale in the total group of twenty-one, eight were from the greater Denver area.

Although rubella and virus during the prenatal period accounted for the greatest percentage of blindness among this group (seven, and very possibly plus one, of those listed as unknown), the expected "wave" of rubella children was not found. Birthdates for these seven children were spread over a five-year span with two born in 1960, two in 1964, and one each in 1962, 1963, and 1965, with each of the seven born during a different month. Possibly more rubella children were born having severe impairment and have since been institutionalized. More rare, as well as more difficult to achieve, institutionalization of young children would seem to account for but a few cases.

The fact that five of the six highest achieving children within this study have some vision, while only one is totally blind, appears noteworthy. Of the five lowest achieving children, three are totally blind.

Implications

Continuation of observation and a program of intervention on behalf of this group of preschool blind children seem indicated by this initial study. Specific situations needing further clarification and longitudinal dimension added to this cross section description are:

1. The relationship of certain areas of development appear to be consistently paired. For example, the two areas of occupation and dressing had parallel situations from the 2-5 year levels in this study.
2. Apparently some developmental skills emerged while others receded (eating and socialization, for example). A continuation of recorded observation is needed to determine if these patterns are consistent with achievement levels and to extend the range to other ages.
3. If children can be evaluated by achievement levels of social maturity, it seems feasible to incorporate "developmental" counseling programs for their parents to parallel growth patterns with corresponding emotional and attitudinal factors.
4. Further investigation of parental attitudes in relation to the children's degree of vision is indicated.

5. Further investigation of parental attitudes in relation to highest achieving children is desirable.

A program of more extensive work with these children and re-evaluation is needed. This could conceivably be achieved by involvement of college graduate students working with these preschool children on an individual basis as an integral part of their observation and participation projects.

From a longitudinal compilation of strengths and weaknesses at progressive developmental levels, a comprehensive preschool program incorporating the child's needs with parental needs could be evolved.

Recommendations

1. Parent counseling and education--individual and group--are recommended as a proposed three-pronged program.

One section of the parent counseling program should emphasize parental attitudes and expectancies. Discussion allowing expression of feelings and fears of the parents, how to treat a child who is blind, and what this child can do, would be encouraged. This counseling should be correlated with concurrent medical counseling toward the over-all goal of early parental acceptance.

A second section of parent counseling and education

would be based upon the child's performance and his socialization within the home environment. Progressive degrees of freedom and opportunities for physical development, for self-care skills, and for independent activities should be programmed. Interrelationships with siblings, discipline, and family rules would be incorporated.

The third area of counseling and education would encompass socialization beyond the home environment. Integration with sighted children in local nursery schools and Sunday schools, interaction with the neighborhood, play activities to share with peer groups, mobility and orientation skills--including posture and gait--and areas such as good manners relevant to the child's age would be stressed so that both the child and the parents would feel comfortable and competent beyond the limits of their home situation.

2. Expansion of Preschool Services at State Level is recommended. This could be done by:

- a) Services for the Blind providing continuation of administration of the Maxfield-Buchholz Scale and the PARI to new cases and a periodic re-evaluation

of known children to determine rate of progress. This information provided consistently would give needed breadth to existing knowledge as well as maintaining a common base line for educational evaluation and planning.

- b) Parent counseling services becoming available to residents beyond the greater Denver area.
- c) Involvement of graduate students in special education by tutoring specific skills on an individual basis.
- d) State School for the Blind instituting a readiness and/or remedial program for children not considered eligible for school placement in the existing programs. This might involve foster home placement plus a nurseryschool-kindergarten program or a special cottage type facility with house parents. Conceivably, this project could be funded separately from the existing school program for the blind.
- e) State School for the Blind offering a day program for three to six-year-old children.

3. Local services recommended for preschool blind children would involve:

- a) Counties having preschool blind children could make arrangements for integrated nursery school programs, such as Head Start facilities. If teacher assistance is a crucial factor, practicums for graduate school special education students could be arranged.
- b) School systems and services for the blind to work with health services within the community for early identification and integration of services and counseling.
- c) Short training institutes instigated for local health and education personnel in all areas of handicapping conditions. This would integrate knowledge of both health and education areas to the better understanding of the child's total situation.

APPENDIX A

MAXFIELD-BUCHHOLZ SCALE OF SOCIAL MATURITY
FOR USE WITH PRESCHOOL BLIND CHILDREN

Record Date _____

Name _____ Birthdate _____

Address _____ Chronological Age _____

SCORING:

Year Level	G	D	E	C	L	S	O	Total Items	Items Passed	SA Values
0- I	10	0	0	2	1	2	5	20	_____ x .05	_____
I- II	5	2	5	3	3	1	1	20	_____ x .05	_____
II-III	3	2	1	2	3	1	3	15	_____ x .07	_____
III-IV	1	3	1	3	3	2	2	15	_____ x .07	_____
IV-V	1	3	1	2	1	4	3	15	_____ x .07	_____
V-VI	4	5	1	0	0	0	0	10	_____ x .10	_____
Totals	24	15	9	12	11	10	14	95	Total S.A.	_____

S.A.
S.Q.C.A.

G - General
D - Dressing
E - Eating
C - Communication
L - Locomotion
S - Socialization
O - Occupation

General

Age
Levels

- 0-I Balances Head
Head no longer needs to be supported when child is held upright. This item depends largely upon physiological maturation.
- 0-I Grasps and holds small objects which come in contact with hand.
The child closes his hand around the object and holds it for at least ten seconds. To fulfill the requirement, the object should be small enough to fit the child's hand comfortably. This item can usually be validated by direct observation.
- 0-I Attempts to regain lost object.
Indicates continued interest in an object that has slipped from his grasp, but which is still in contact with some part of his body.
- 0-I Rolls over.
Moves from prone position to lying on stomach, and the reverse.
- 0-I Reaches for nearby objects which are slightly beyond reach, but which he is aware of through some type of stimulation.

Stimuli may be in the form of noise (a rattle, vibration or odor, but are not in contact with child. He must show awareness of, and interest in, things beyond his immediate reach. This gives some indication of the use of his other senses. Examiner can often test this item by using sound-producing toys to attract the child's interest.
- 0-I Releases object with contact. Is able to transfer small objects from one hand to the other, or release it against a resisting surface.
Releases an object voluntarily by putting it down on a flat, hard surface. He may not do this in response to a command, but it should be credited if he does it spontaneously and frequently.
- 0-I Pulls self to a standing position assisted by adult holding both hands

AgeLevels

The adult's help is minimal. The emphasis is on the attempt by the child to straighten his legs and to maintain some balance. The examiner, in playing with the child, can often test this item directly.

- 0-I Can voluntarily release objects in mid-air_____
 Child drops an object voluntarily without aid of a resisting surface. The object does not merely fall out of his hand, but is spontaneously thrown down or dropped.
- 0-I Grasps with thumb and finger_____
 Child habitually opposes his thumb to his other four fingers in picking up or holding object. May pick up small buttons or pebbles this way.
- 0-I Sits unsupported for several minutes_____
 Sits with back straight and without support for at least three minutes.
- I-II Lowers self from standing to sitting position without assistance from other person_____
 Child may help himself by holding on to some object, but not a person. Lowers self purposely, without falling.
- I-II Pulls self to standing position (using objects but not a person)._____
 Gets from sitting to standing position by pulling himself up holding to crib or furniture, not a person.
- I-II Responds to music by making general body responses to rhythm; may hum or sing._____
 Inquiry should get at a description of how child reacts when he hears music.
- I-II Overcomes simple obstacles in the course of moving about.

 Pushes small chairs or other small objects out of the way, backs walker or Kiddy Kar when he runs into large object, and solves other simple problems.
- I-II Uses intermediary objects, such as a stool to stand on, or stick as an implement._____
 Climbs on stool or chair to reach. Uses stick as implement for reaching.

- II-III Fetches or carries familiar objects from a person in one room to a person in another familiar room. _____
Child usually responds to request to bring something from one room to a person he knows in another room.
- II-III Avoids simple hazards. _____
Shows caution. Knows of certain dangers and avoids them; i.e., falling downstairs or crossing street.
- II-III Uses basket or other receptacle for carrying small objects from one place to another, or for transporting sand or water. _____
May pile blocks into a wagon, or put sand into a pail, and carry it around from place to place. Child has grasped idea that things can fit into one another and can be transported.
- III-IV Asks to go to toilet. _____
Indicates that he needs to go to the toilet, except occasionally at night or under stress.
- IV-V Cares for self at toilet. _____
Takes care of toilet needs, including use of toilet paper, without more than minimum help from adult.
- V-VI Knows whether it is morning, afternoon, or evening. _____
A child's gauge as to general time of day is likely to be in terms of when he last ate. Ability to read a clock is not necessary for this item.
- V-VI Can skip or hop on one foot with some proficiency. _____
Has attained sufficient physical balance and self-confidence to hop on one foot or to skip with some proficiency.
- V-VI Ties simple bow knots which remain tied. _____
Such as shoelaces.
- V-VI Usually differentiates between "pretending" and actual fact. _____
Knows that imaginary companion does not really exist--that animals do not really talk. When he is telling a story, is usually aware of whether or not it really happened.

Dressing

- I-II Cooperates in dressing to the extent of lifting arm or leg at appropriate time.
 Finds large armholes, and lifts arms or legs when required.
 Is helpful and cooperative in the general dressing procedure.
- I-II Pulls off socks and shoes when unfastened and not too tight, as an act of undressing.
 Shoes and socks should be easy to remove. Many children at an earlier level do this in play, but to score plus, the child must associate the act with undressing and do it at the appropriate time.
- II-III Removes coat or garment which is unfastened and not too tight.
 Garment should be unfastened, should open clear down the front, and should be easy to remove. Child should take it off as a part of undressing, as, for example, when he comes in from outdoors.
- II-III Makes a definite effort to pull up or push down unfastened panties as an act of undressing or when going to toilet.
 May not be completely successful, but definite attempt is indicated.
- III-IV Puts on coat or simple garment if given it in the right position and helped slightly in getting it started. Need not fasten.
 May be handed him in right position. Need not fasten. Slight help may be given him when he starts or finishes.
- III-IV Dries hands acceptably.
 Uses towel properly. When job is complete, the hands are dry both outside and inside.
- III-IV Washes hands unassisted.
 Washes hands properly without assistance. Thoroughness of the washing may be checked later. If adult inspection reveals that the hands are still dirty, the child washes them again, satisfactorily, without help.
- IV-V Puts on coat or simple garment unassisted.
 Can put on outer, loose garments without help.

- IV-V Washes face unaided. _____
Completes washing of face satisfactorily and without help.
- IV-V Unbuttons front and side buttons if not too small. _____
Buttons should be large enough to handle comfortably, and should fit easily into the buttonholes.
- V-VI Brushes teeth with only general supervision. _____
Parent may stand by to see that it is done satisfactorily, but offers no help.
- V-VI Dresses self except tying. _____
Completes whole dressing process except for tying shoelaces, or other bowknots.
- V-VI Buttons fairly large front and side buttons. _____
Buttons should be large enough to handle comfortably, and fit easily in the buttonholes.
- V-VI Hangs up clothes as part of dressing or undressing. _____
Hangs clothes on low hook, puts towel away after washing, or otherwise gives evidence that he is beginning to take responsibility for his own things.
- V-VI Brushes and combs hair acceptably. _____
May be left alone to brush and comb hair for simple hairdo.

Eating

- I-II Chews and swallows solid food. _____
Eats such things as crackers or cookies. For the score to be plus, both chewing and swallowing must take place.
- I-II Drinks from a cup or glass which is held for him. _____
Cup or glass may be held entirely by adult but infant drinks from it without much spilling.
- I-II Drinks from cup or glass, definitely attempting to hold it, but cannot be relied upon to retain grasp. _____
This item differs from Item 23 in that the child holds the cup or glass himself even though he may not retain his grasp. Drinks without spilling.
- I-II Drinks from cup or glass, holding it for self, but may need help returning it to the table. _____
May need help in setting glass down. Not scored plus if any help is given in holding glass while child is drinking.

I-II Shows definite attempt to feed self with spoon, but help may be given in putting food on spoon and guiding it to mouth.

Help may be given child in putting food on to the spoon and guiding it to mouth. The relationship between the dish and mouth may not have been mastered so that he still needs help in this respect.

I-III Drinks from cup unassisted and replaces it on table. Child handles cup or glass without any assistance from adult.

III-IV Eats with spoon without help and with moderate spilling.

Child now feeds himself with a spoon with only a little spilling. No adult help is needed.

IV-V Eats with fork with only moderate spilling. May use in spoon fashion.

Fork may be used in spoon fashion.

V-VI Uses knife for cutting and spreading soft foods, such as bread and butter.

Handles knife that is not sharp in buttering bread, and so forth.

Communication

0-I Inhibits simple acts upon familiar command. This seems to be the beginning of an understanding of relationships between himself and the verbal commands given by others.

0-I "Talks" imitates speech patterns. Child experiments with sounds and speech patterns, and "converses" even though no actual words are used. The making of repetitive sounds and vocalizations, such as are characteristics of mentally low-grade children, does not fulfill this item.

I-II Makes positive response to simple command or request. Will hand over a toy or object, or come to a person on request. Picks up an object in response to a simple command, such as "pick up the block."

I-II Says two or more words which have definite meaning for him.

These words are said at appropriate times and convey definite and specific meaning to the listener. They do not include "mama" and "dada."

I-II Indicates needs or desires.

Communicates needs such as going to the toilet or getting down from a high chair through words, or through specific sounds or motions which clearly indicate what is wanted. Care must be taken not to score plus for instances where the parent anticipates the need, or, in the case of wetting, the child indicates what has already happened.

II-III Uses names of familiar objects.

Child refers by name to familiar objects such as a favorite toy, or a cup. Word used must have definite relation to object. Persons are not counted as objects.

II-III Talks in short sentences.

Uses meaningful combinations of words, in spontaneous verbal expression of his own thought.

III-IV Relates experiences.

Tells what he has been doing, or where he has been, in fairly connected and understandable sequence. Enjoys describing what has happened.

III-IV Uses pronouns "I," "me," "you" with some understanding.

Refers to self in the first person, and to others with the suitable pronoun. Understands the difference between the three pronouns, even though he may make occasional errors.

III-IV Uses past tense and plural forms correctly.

Uses past tense to refer to events that have already happened. As a rule, uses plural forms appropriately.

IV-V Asks questions about meanings of words, how things work and what they are for.

Seems to be really inquisitive about objects and happenings in environment.

- IV-V Tells a long, familiar story of at least two or three episodes, possibly with some change in detail. _____
 • Retells stories of at least two or three episodes that he has heard before with a fair degree of continuity and accuracy, although he may change minor details and add embellishments of his own.

Locomotion

- 0-I. Moves about on flat surface in one fashion or another.

 May move about by creeping, pulling himself around in sitting position, sliding around in almost prone position, or hitching along backwards. Rolling over does not satisfy requirement for this item.
- I-II Walks sideways when holding to pen or furniture without assistance. _____
 Travels around room sideways with no help from adult, but may hold on to furniture.
- I-II Walks with slight physical support. _____
 Has almost attained balance and independent control, but does not go alone either through lack of confidence or actual physical inability.
- I-II Stands alone. _____
 Stands alone on hard, flat surface, completely without support. May still be unsteady and have a wide stance.
- II-III Walks without assistance for short period of time. _____
 Child walks unassisted, and without falling, the distance of approximately one-half the length of an ordinary room.
- II-III Walks about house or yard freely with only occasional use of objects and guides. _____
 Is familiar with location of various objects so that he walks easily and without constant use of hands. This item is not scored plus if the child habitually walks in a familiar place with his hands out before him, or with one hand touching the wall or other objects.
- II-III Walks upstairs with physical help. May hold rail or be accompanied and encouraged. _____
 Child walks upstairs without physical help, although he may pull himself up by holding to rail. Adult is present and may furnish verbal encouragement.

- III-IV Walks upstairs unaccompanied. May hold rail. _____
 Child walks upstairs "on his own," with no one
 accompanying him.
- III-IV Jumps with both feet from low box or bottom step. _____
 Lets himself go, in space, and has the necessary balance
 and coordination to do so.
- III-IV Walks down stairs one step per tread placing alternate feet
 on successive steps. _____
 Goes downstairs in adult fashion, with no help from
 anyone. May hold rail for confidence or because of
 depth of step.
- IV-V Goes about immediate neighborhood freely. _____
 This does not necessarily include the crossing of streets,
 and knowledge of child's whereabouts may be required, but
 he goes about outdoors alone.

Socialization

- 0-I Responds to familiar person by wiggling, gurgling, or other-
 wise showing desire for being picked up or cuddled. _____
 The child shows awareness of the fact that a familiar
 person is close by and responds to him by wiggling,
 gurgling, or reaching out. He shows pleasure at being
 held, and displeasure at being put down. To elicit the
 information required by this item, the examiner may ask
 several questions, such as, "What does he do when you
 (a familiar person) approach him, or his crib?"
- 0-I Demands personal attention. _____
 Child wants to be noticed and included in what is going
 on around him. He may manifest this desire by making
 noises, laughing, bouncing, and then waiting to hear
 the reaction.
- I-II Parallel play with other children with only slight give
 and take. _____
 Obviously enjoys being with other children. May be some
 attempt to defend own rights, with considerable snatch
 and grab of other children's property.
- II-III Listens attentively to short simple stories which have
 repetition and familiar characters. _____
 Enjoys simple fairy tales, Mother Goose stories. Sits
 relatively still and does not lose interest.

- III-IV Plays cooperatively at the preschool level.
Is beginning to cooperate in various ways, such as on the rocking boat, or in willingness to wait his turn. Plays circle games, participates with groups in rhythms.
- III-IV Enjoys nonsense rhymes and humorous phase of stories. May react stories with silly language.
Gives evidence of understanding things that are funny, absurd, and enjoys them.
- IV-V Plays singing games, takes active part in dramatic play such as dramatic songs or stories.
Begins to interpret songs and stories and acts them out. Plays singing games.
- IV-V Well adjusted to leaving parent or other familiar person.
Leaves home for school or other destination alone or with playmates, without difficulty in parting from adult to whom he is emotionally attached.
- IV-V Adjusts readily to group situation involving some conformity to rules, such as kindergarten class or shopping trip.
Without too much difficulty, child accepts limits or regulations in a relatively well-structured situation, such as nursery school group or on a shopping trip.
- IV-V Is spurred on in various activities by competition of other children of approximately same age and group.
Does his best to win the game, jump the highest, and so forth.

Occupation

- 0-I Bangs, shakes, feels, or otherwise plays with objects for a few minutes.
Explores and plays with object for about three minutes. Play is random, but indicates interest in object with which he can do things.
- 0-I Occupies self unattended for fifteen minutes with one or more objects.
Deliberate focusing of attention on the play activity with relatively prolonged attention span. This must be differentiated from the performance of a child who spends a great deal of time engaging in simple repetitive movements, such as ganging.

- 0-I Shows preference in choice of play materials. _____
 Play materials may be anything that child enjoys playing with, even pots and pans. The child frequently hunts out a particular toy and plays with it to the exclusion of others. However, this should be differentiated from a fixation on one or more toys, or from a mere lack of interest in other things. It must be a positive interest in certain playthings at a given time.
- 0-I Shows active interest in various sounds such as bells, whistles, etc. _____
 Child reacts to such things as the ringing of a telephone, a doorbell, or the sound of a whistle with intent listening and mimicking, and with obvious interest in the source of the sound.
- 0-I Shows active curiosity about objects in environment as demonstrated by fairly intent examination. _____
 Examines objects in various ways, such as testing, feeling, banging, or in moving across the floor towards some sound.
- I-II Shows definite interest in working movable parts of objects, such as a hinged box top, or a removable lid on a can. _____
 May enjoy taking lids off pots and pans and replacing them, fitting objects into one another, and so forth.
- II-III Touches or feels objects of various textures in exploratory fashion, such as fur, velvet, satin, etc. _____
 Inquiry should be made as to what kind of things the child likes to touch, and as to how he handles things.
- II-III Shows evidence of planfulness in arranging objects with relation to one another, although may be somewhat disorganized piles and groups. _____
 Child may use blocks, toy trucks, and so forth, arranging them with some evidence of relationship to each other. Credit is still given even though the child may lack the dexterity to make precise arrangements or groupings. Emphasis is on the evidence of a beginning of planfulness in the play.
- II-III Initiates own play activity by exploring and examining objects in a prolonged and organized manner. _____
 More organized play than required in item 46 (above item). Child will begin to play, seemingly with some objective in mind, and continue the play at least for a number of minutes.

III-IV Carries out constructive activity such as manipulating clay, bread, dough, or mud; or hammering large nails into soft wood.

Manipulates materials to some constructive end, such as making forms out of clay, pounding, hammering nails into soft wood.

III-IV Helps at little household tasks.

Follows mother around helping her dust, sweep, do the dishes, and so forth. May have specific duties to fulfill, like picking up his toys before dinner, or feeding the cat.

IV-V Uses sled, wagon, or skates.

Uses at least one of the articles mentioned, or something similar, without apparent timidity in steering himself.

IV-V Makes forms with some approximation to that of intended object, such as pies, cakes, etc. May use clay, sand, mud, or other medium.

Makes such things as pies or cakes out of mud, clay, sand, or other medium. Recognizes familiar forms well enough to try to imitate in a three-dimensional medium.

IV-V Carries out extended projects, involving physical activity which carry over from one day to the next.

Plans and organizes games which involve his interest and activity. Will leave toys set up until the next day when he will continue the game. What he does should be indicated by prolonged interest and of readiness to carry ideas over from day to day.

APPENDIX B

PARENT ATTITUDE RESEARCH INSTRUMENT

Please indicate your opinion by drawing a circle around the "A" if you strongly agree, around the "a" if you mildly agree, around the "d" if you mildly disagree, and around the "D" if you strongly disagree. If you have any ideas which you feel should be included, jot them down at the end. We would appreciate having them. Others who have given us their ideas say that it is best to work rapidly. Give your first reaction. If you read and reread the statements, it tends to be confusing and time-consuming.

There are no right or wrong answers, so answer according to your own opinion. It is very important that all questions be answered. Many of the statements will seem alike but all are necessary to show slight differences of opinion.

	Agree		Disagree	
1. Children should be allowed to disagree with their parents if they feel their own ideas are better.	A	a	d	D
2. It's best for the child if he never gets started wondering whether his mother's views are right.	A	a	d	A
3. Parents should adjust to the children some rather than always expecting the children to adjust to the parents.	A	a	d	D
4. Parents must earn the respect of their children by the way they act.	A	a	d	D
5. Children would be happier and better behaved if parents would show an interest in their affairs.	A	a	d	D

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| 6. Some children are just so bad they must be taught to fear adults for their own good. | A | a | d | D |
| 7. Children will get on any woman's nerves if she has to be with them all day. | A | a | d | D |
| 8. One of the worst things about taking care of a home is a woman feels that she can't get out. | A | a | d | D |
| 9. If you let children talk about their troubles they end up complaining even more. | A | a | d | D |
| 10. There is nothing worse for a young mother than being alone while going through her first experience with a baby. | A | a | d | D |
| 11. Most children are toilet trained by 15 months of age. | A | a | d | D |
| 12. The sooner a child learns to walk the better he's trained. | A | a | d | D |
| 13. A child will be grateful later on for strict training. | A | a | d | D |
| 14. A mother should make it her business to know everything her children are thinking. | A | a | d | D |
| 15. A good mother should shelter her child from life's little difficulties. | A | a | d | D |
| 16. There are so many things a child has to learn in life there is no excuse for him sitting around with time on his hands. | A | a | d | D |
| 17. Children should be encouraged to tell their parents about it whenever they feel family rules are unreasonable. | A | a | d | D |
| 18. A parent should never be made to look wrong in a child's eyes. | A | a | d | D |

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| 19. Children are too often asked to do all the compromising and adjustment and that is not fair. | A | a | d | D |
| 20. As much as is reasonable, a parent should try to treat a child as an equal. | A | a | d | D |
| 21. Parents who are interested in hearing about their children's parties, dates, and fun help them grow up right. | A | a | d | D |
| 22. It is frequently necessary to drive the mischief out of a child before he will behave. | A | a | d | D |
| 23. Mothers very often feel that they can't stand their children a moment longer. | A | a | d | D |
| 24. Having to be with children all the time gives a woman the feeling her wings have been clipped. | A | a | d | D |
| 25. Parents who start a child talking about his worries don't realize that sometimes it's better to just leave well enough alone. | A | a | d | D |
| 26. It isn't fair that a woman has to bear just about all the burden of raising children by herself. | A | a | d | D |
| 27. The earlier a child is weaned from its emotional ties to its parents the better it will handle its own problems. | A | a | d | D |
| 28. A child should be weaned away from the bottle or breast as soon as possible. | A | a | d | D |
| 29. Most young mothers are bothered more by the feeling of being shut up in the home than by anything else. | A | a | d | D |
| 30. A child should never keep a secret from his parents. | A | a | d | D |
| 31. A child should be protected from jobs which might be too tiring or hard for him. | A | a | d | D |

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| 32. Children who don't try hard for success will feel that they have missed out on things later on. | A | a | d | D |
| 33. A child has a right to his own point of view and ought to be allowed to express it. | A | a | d | D |
| 34. Children should never learn things outside the home which make them doubt their parents' ideas. | A | a | d | D |
| 35. There is no reason parents should have their own way all the time, any more than that children should have their own way all the time. | A | a | d | D |
| 36. Children seldom express anything worthwhile; their ideas are usually unimportant. | A | a | d | D |
| 37. If parents would have fun with their children, the children would be more apt to take their advice. | A | a | d | D |
| 38. A wise parent will teach a child early just who is boss. | A | a | d | D |
| 39. It's a rare mother who can be sweet and even-tempered with her children all day. | A | a | d | D |
| 40. Husbands could do their part if they were less selfish. | A | a | d | D |
| 41. Children pester you with all their little upsets if you aren't careful from the first. | A | a | d | D |
| 42. A wise woman will do anything to avoid being by herself before and after a new baby. | A | a | d | D |
| 43. Children's grades in school are a reflection of the intelligence of their parents. | A | a | d | D |
| 44. It is more effective to punish a child for not doing well than to reward him for succeeding. | A | a | d | D |

45. Children who are held to firm rules grow up to be the best adults.	A	a	d	D
46. An alert parent should try to learn all her child's thoughts.	A	a	d	D
47. Children should be kept away from all hard jobs which might be discouraging.	A	a	d	D
48. Parents should teach their children that the way to get ahead is to keep busy and not waste time.	A	a	d	D
49. A child's ideas should be seriously considered in making family decisions.	A	a	d	D
50. The child should not question the thinking of the parents.	A	a	d	D
51. No child should ever set his will against that of his parents.	A	a	d	D
52. Children should fear their parents to some degree.	A	a	d	D
53. When you do things together, children feel close to you and can talk easier.	A	a	d	D
54. Children need some of the natural meanness taken out of them.	A	a	d	D
55. Raising children is a nerve-wracking job.	A	a	d	D
56. One of the bad things about raising children is that you aren't free enough of the time to do just as you like.	A	a	d	D
57. The trouble with giving attention to children's problems is they usually just make up a lot of stories to keep you interested.	A	a	d	D
58. Most women need more time than they are given to rest up in the home after going through childbirth.	A	a	d	D
59. A child never sets high enough standards for himself.	A	a	d	D

60.	When a child does something well we can start setting his sights higher.	A	a	d	D
61.	Strict discipline develops a fine, strong character.	A	a	d	D
62.	It is a mother's duty to make sure she knows her child's innermost thoughts.	A	a	d	D
63.	I liked my child best when I could do everything for him.	A	a	d	D
64.	The sooner a child learns that a wasted minute is lost forever, the better off he will be.	A	a	d	D
65.	When a child is in trouble he ought to know he won't be punished for talking about it with his parents.	A	a	d	D
66.	Parents should be careful lest their children choose the wrong friends.	A	a	d	D
67.	A child should always accept the decision of his parents.	A	a	d	D
68.	Children should do nothing without the consent of their parents.	A	a	d	D
69.	Children should have a say in the making of family plans.	A	a	d	D
70.	It is sometimes necessary for the parent to break the child's will.	A	a	d	D
71.	It's natural for a mother to "blow her top" when children are selfish and demanding.	A	a	d	D
72.	A young mother feels "held down" because there are lots of things she wants to do while she is young.	A	a	d	D
73.	Children should not annoy their parents with their unimportant problems.	A	a	d	D

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| 74. Taking care of a small baby is something that no woman should be expected to do all by herself. | A | a | d | D |
| 75. Some children don't realize how lucky they are to have parents setting high goals for them. | A | a | d | D |
| 76. If a child is pushed into an activity before he is ready, he will learn that much earlier. | A | a | d | D |
| 77. Unless one judges a child according to strict standards, he will not be industrious. | A | a | d | D |
| 78. It is a parent's business to know what a child is up to at all times. | A | a | d | D |
| 79. Children are better off if their parents are around to tell them what to do all the time. | A | a | d | D |
| 80. A child should be rewarded for trying even if he does not succeed. | A | a | d | D |

APPENDIX C

LETTER REQUESTING PARTICIPATION OF PARENTS,
COVER LETTER, AND PARENTAL
PERMISSION CARD

COLORADO STATE COLLEGE

Greeley, Colorado

As we become aware of the increasing numbers and needs of our children having visual problems, we find it necessary to study this situation in greater depth. In order to identify these educational needs, Miss Donna Endress would appreciate the opportunity of visiting you at your home in order to learn ways you have found best in raising your child and areas in which you would like suggestions or help. Miss Endress, who is now completing advanced studies in special education at Colorado State College and who has been a teacher of children who are blind, is particularly interested in the young child before he starts school.

What we are able to learn from you will contribute to the long range purpose of increasing and improving educational programs for our children.

This project is under the sponsorship of Colorado State College with the approval of the Division of Services for the Blind, Colorado Department of Rehabilitation.

The visit will last approximately one hour and will be only by specific appointment, thus enabling you to know the date and the time of the interview.

We would appreciate your prompt returning of the self-addressed card indicating your willingness to permit us to visit with you the last week in October or during the month of November.

Thank you for your cooperation.

Sincerely,

Tony D. Vaughan
Chairman, Department
Special Education

TDV:de
2 enc.

DEPARTMENT OF REHABILITATION
Division of Services for the Blind
October 27, 1967

We are addressing the enclosed letter to you on behalf of Miss Endress. As you know, we do not transmit information about blind individuals without their approval (or that of their families). Therefore, we agreed to send to you her request for an appointment. We are most enthusiastic about the study of children she is endeavoring to make. We hope through her interviews she may gain some knowledge which will be of help to all of us.

Miss Endress is a sensitive, understanding young woman with whom you will be very comfortable I am sure. If you are willing to have her call, just return the enclosed card right away.

Sincerely,

(Mrs.) Dorothy E. Tynar, Supervisor
Home Teaching Services

DET:gb
Enc.

I AM WILLING TO HAVE MISS ENDRESS VISIT BY APPOINTMENT.

SIGNATURE _____

ADDRESS _____

COUNTY _____ TELEPHONE _____

CHILD'S NAME _____

CHILD'S BIRTHDATE _____

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